

FINANCIAL TIMES

UNEMPLOYMENT

A solution for
east Germany

Page 16

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Tuesday May 21 1991

World News Business Summary

Zulus agree to curb use of 'cultural weapons'

President de Klerk of South Africa appears to have won an important concession from Zulu leaders on the carrying of 'tribal weapons', or spears, in traditional black townships. The agreement paves the way for relations to be restored between the government and the African National Congress. Page 18: Reversal on land claim decision. Page 6

India poll violence

At least 36 people were killed after violence erupted at the start of India's week-long parliamentary elections. Page 6

Yugoslav aid threat

European Commission officials warned that continued aid for Yugoslavia was threatened unless the country resolved its ethnic conflicts. Page 2

Dohuk handed over

US troops entered the city of Dohuk in northern Iraq to prepare for the return of thousands of Kurdish refugees still stranded on the Turkish border. Page 6

Fighting halts aid

Fighting between Ethiopian government forces and rebels has halted a famine relief programme supplying up to a million drought victims, aid officials said. Page 2

Peking talks hitch

Talks to normalise ties between North Korea and Japan became bogged down over Tokyo's demand that Pyongyang open its nuclear sites to international inspection. Page 2

Thai heroin seized

Thai police seized more than half a tonne of heroin near the Cambodian border in their biggest drugs haul in three years. Page 2

Bangladesh turmoil

Violent clashes returned to Bangladesh, killing more than 70 people and injuring 1,400, as a 10-day strike stepped up efforts to save millions made destitute by last month's cyclone. Page 2

Journalists 'freed'

The Medellin drug cartel said it ordered the release of two kidnapped journalists to persuade the Colombian government to stop extraditing suspected drug smugglers. Page 4

Last-ditch air talks

Soviet government and union negotiators were locked in talks in an 11th-hour attempt to prevent a disruptive air traffic controllers' strike. Page 2

Computer blamed

US defence officials said a computer used to trigger US Patriot missiles failed to detect an Iraqi Scud missile that exploded and killed 28 Americans in Saudi Arabia during the Gulf War. Page 2

Polish remorse

President Lech Walesa, on a state visit to Israel, asked the Israeli people for forgiveness over the bitter Jewish accusation of collaboration with Nazis during the Second World War. Page 6

Harare protest ends

Hundreds of students returned to classes at Zimbabwe's only university, breaking a three-week anti-government boycott that prompted threats to oust the entire student body. Page 2

Mubarak reshuffle

President Mubarak of Egypt reshuffled his cabinet and appointed new defence and foreign ministers, but to some surprise there were no changes in economic portfolios. Page 6

Rubbish piles high

Polish authorities took emergency powers to call in troops and private firms to help clean the capital, Warsaw, as a strike by rubbish collectors entered its fifth day. Page 2

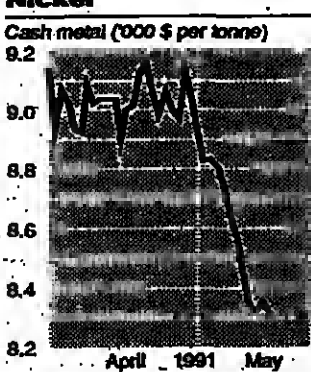
LTV plan to sell defence unit criticised by creditors

LTV, US steel company, announced plans to sell its large defence and aerospace business to help it out of bankruptcy proceedings but the plan has run into immediate opposition from creditors of the division. Page 2

LTV's defence and aerospace company makes missiles, rockets, space systems, military vehicles and sub-assemblies for military and commercial aircraft. The company, which employs 16,000 people, is the 20th largest defence contractor in the US with sales in 1990 of about \$2bn. Page 19

NICKEL: LME nickel prices fell to session lows on general liquidation, but sporadic consumer interest prevented substantial losses, dealers said. Three months traded last at 8,300 dms a tonne, down 100 dms from Friday's last close. Commodities, Page 30

Nickel



MARKETS: In New York an early rise in bond values helped boost sentiment in the stock market, but gains were relatively modest, with the Dow Jones Industrial Average ending 7.29 at 2,854.41 by 1.30 pm. Tokyo share prices declined across the board as this volume accentuated selling by arbitrageurs and investment trusts. The Nikkei average fell 178.51 to 26,558.35 on volume down 30% to 260m shares. Most European bourses were closed for Whit Monday and Toronto was closed for Victoria Day. Of those that were open, Fiat continued to weigh down the Italian bourse on renewed fears that the company would cut its 1990 dividend. Spain moved higher in quiet trading, but most of the excitement was restricted to the emerging markets. World Stock Market Reports, Back Page, Section II

MONTEDISON, Italian chemicals, energy and agro-industrial concern, reports consolidated after-tax profits, net of minority interests, of L556bn (\$433m) for 1990. Page 19

EC and the Australian-led Cairns Group of agricultural exporting nations within the negotiations of the General Agreement on Tariffs and Trade appeared firmly at odds after talks in Canberra failed to break down differences over trade liberalisation. Page 7

BOND Corporation shareholders approved a proposed debt-for-equity swap leaving Mr Alan Bond, former chairman, with less than 5 per cent of the group's shares. Page 20

JVC, Japanese consumer electronics company, reported a 27.1 per cent drop in consolidated pre-tax profits for the year to March 1991 to ¥26.3bn (\$190m). Page 20

OMRON, Japan's top maker of control components, reported a 2.3 per cent rise in pre-tax profit to ¥27.775bn (\$200m) for the year to end March, reflecting continued growth in the Japanese economy. Page 23

THREE leading Japanese real estate companies, Mitsu Real Estate, Mitsubishi Estate and Sumitomo Realty saw strong sales growth for the year, but pre-tax profits did not keep pace under tighter financial regulations. Page 23

Soviets to lift restrictions on travel abroad in 1993

By Leyla Boulton in Moscow

THE Soviet parliament yesterday approved a law allowing free travel out of the country for the first time which the US has made a condition for improving trade relations.

However, what should have been a milestone for human rights was marred by a decision to postpone its implementation until 1993.

After rejecting the bill three times last week, deputies finally approved it in principle by 380 votes to 37 with 32 abstentions. This means that the law, which has yet to be debated article by article, can still be modified.

The US has made free exit from the Soviet Union a precondition for granting the Soviet Union most-favoured-nation status. The White House said the law was a hopeful sign but that it was too soon to say whether it would allow the US to extend favourable trade status to Moscow.

It still has another step to go in its legislative process, so we'll have to wait and see whether it satisfies our concern and our conditions for MFN (most-favoured-nation status), Mr Martin Fitzwater, White House spokesman, said.

The Foreign Office welcomed the law but said it would have to study the full details before Britain made a decision on whether to attend the scheduled human rights conference due to be held in Moscow in October.

British officials said that liberalising emigration was only one of the conditions the western countries wanted to see fulfilled before they participated in the conference.

The others included judicial independence, reform of Soviet criminal legislation, freedom of speech and freedom of religion.

A decision by the US, Britain and other western countries on their participation will only be taken on the basis of careful study of all the components making up greater human freedom.

No date has been fixed for such a decision, but it seems likely that it will be taken later in the summer.

The passing of the legislation coincides with intensive Soviet efforts to secure substantial western financial assistance for genuine market reforms.

The Soviet government, which originally asked for the legislation to come into effect in July 1992, says it needs time to overhaul its cumbersome travel bureaucracy, at a cost of \$500m.

No doubt it is also afraid of a drain on its scarce hard currency resources.

Conservative opponents of the bill, who were instrumental in postponing its implementation, still further, voiced fears it would trigger a "brain drain" and encourage smuggling by dreaded "speculators".

The law was given preliminary approval in parliament almost two years ago. Soviet authorities estimate that between 500,000 and 3m people will emigrate once the law is passed.

Nearly half a million people emigrated last year, mainly to Israel and West Germany. But even if Soviet travel laws are liberalised, Soviet citizens will have to overcome tough new visa requirements by western countries, as well as long domestic waiting lists for train and aircraft tickets.

Although restrictions have been eased considerably since President Mikhail Gorbachev came to power six years ago, Soviet citizens still require an exit visa and an invitation from foreign hosts, even for short trips abroad.

The new law provides for the unrestricted issue of foreign travel passports - except to people facing military service or criminal investigation.

It imposes a five-year waiting period, however, on people deemed to hold state secrets.

Air traffic talks, Page 2

Kohl calls for United States of Europe

By Peter Riddell, US Editor, in Washington

CHANCELLOR Helmut Kohl, on his first visit to the US as head of a united Germany, yesterday called for the creation of a United States of Europe with continuing strong links to North America.

Mr Kohl sought in a series of meetings and public appearances to offer reassurance that political unification and moves towards the creation of a European defence and security pillar would not weaken Atlantic ties. His comments came in the context of current European Community discussions on political union and the parallel Nato strategy review.

Western European unity would strengthen rather than weaken the Nato alliance, he said. Any European pillar would be inside Nato, rather than an alternative to it. Earlier this year there was friction following warnings by Washington that European moves should not exclude the US and that Nato, rather than an exclusively European body, should remain the focus for collective defence matters.



Chancellor Helmut Kohl is greeted by State Department officials on arriving in the US

This aim, underpinned by Nato's integrated military structure, was reaffirmed in a joint statement 10 days ago by Mr James Baker, US secretary of state, and Mr Hans Dietrich Genscher, the German foreign minister, in the hope of narrowing differences on the issue.

Following criticism of the absence of German troops from the allied effort in the Gulf, the chancellor said he was confident that German forces would

in future be able to serve outside the Nato area under the auspices of the United Nations or the Western European Union.

He also pressed the case for western support for Soviet President Mikhail Gorbachev. "It cannot be our objective to help bring about the dissolution of the Soviet Union," he said.

The US and Germany have been discussing how to respond to Mr Gorbachev's

appeal for western support for his economic reform programme and his desire to attend the annual summit of the Group of Seven leading industrial nations in London in mid-July.

US and British officials are cool to the idea of Mr Gorbachev attending the summit unless he gives a positive commitment on reform. Even if the Soviet leader does attend, he will not participate in the main summit sessions.

UN to exact war reparations from Baghdad's oil revenues

By Michael Littlejohns in New York and Victor Mallet in London

THE UN Security Council yesterday approved a plan to exact war reparations from Iraq by establishing a compensation fund to be financed by Iraqi oil revenues.

Mr Javier Perez de Cuellar, the UN Secretary General, was asked to begin consultations about setting a ceiling for the fund.

Its governing council will comprise all 15 members of the Security Council and work from the UN's European headquarters in Geneva, although the day-to-day operations of the fund may be administered from other financial centres, including London. Initial claims on the fund could amount to as much as \$100bn.

"The scale of the compensation exercise is very large," Mr Jeremy Carver, an international lawyer, said yesterday at a conference in London about the future of Kuwait.

"One is looking at perhaps 2m claims being made to this compensation fund, claims of all possible sizes from all parts of the globe."

US officials have called for 40 to 50 per cent of Iraqi oil revenues to be diverted to the fund, but other governments want a lower figure and a compromise may eventually be reached at around 25 per cent - slightly less than the amount that Iraq was spending on military imports before it invaded Kuwait in August last year.

Frozen Iraqi assets will not contribute to the fund. Iraq has already protested that the compensation plan, first proposed by Mrs Margaret Thatcher when she was UK prime minister, would beggar a generation or more of its citizens.

But there was no public debate in the Security Council yesterday since reparations were part of the ceasefire terms imposed last month and accepted by Baghdad.

Since the embargo remains in place - and the US and Britain have already protested that sanctions to stay until President Saddam Hussein is overthrown or yields power - it may be some time before any

claimants receive compensation.

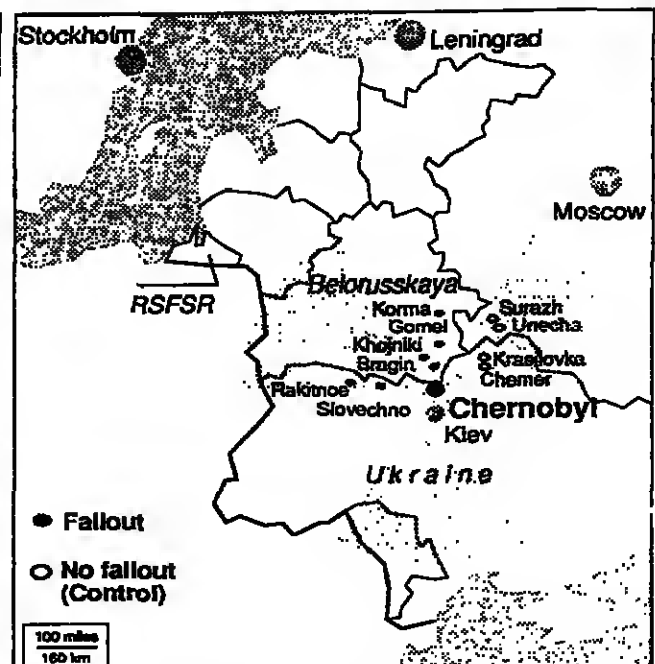
However, the Council also warned that, if Iraq failed to comply when all procedures were in place, the world body intended "to return or to take action to reimpose" sanctions.

Fourteen of the 15 members voted for the resolution, initiated by Britain and the US. Cuba abstained. It was the seventeenth security council resolution on the Gulf crisis.

Based largely on a programme prepared by the secretary general under the ceasefire terms, the resolution establishes the fund to pay compensation for "any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait."

A UN Compensation Commission, overseen by the Governing Council, will administer the fund.

Troops make ready, Page 6



Chernobyl study rejects reports of widespread illness

By David Fishlock, Science Editor, in London

THE FIRST international study of the effects of nuclear fallout from Chernobyl has rejected reports of widespread sickness in the five years since the Soviet nuclear explosion.

It did, however, find widespread anxiety among the population about the adequacy of measures taken by the authorities as well as distrust of the Soviet government and medical and scientific communities.

The International Chernobyl Project, set up by the United Nations at the invitation of the Soviet Union, involved about 200 doctors and scientists from 25 nations, and seven international organisations including the World Health Organisation.

The investigations, lasting more than a year, did not examine the exclusion zone within a radius of 30km around Chernobyl itself - from which residents were moved rapidly in the wake of the explosion.

Instead, it concentrated on areas up to 500km from Chernobyl which were subjected to the drifting radiation cloud.

Rain washed down radioactivity to contaminate large patches of ground in the area, mainly with radioactive caesium from the reactor fuel.

The study found that the Soviet children most exposed to fallout were now generally healthy. However, there appears to be a high level of ill-health among Soviet adults, with 10 to 15 per cent needing medical treatment, although

this appears unrelated to the accident, according to the report.

The investigation found that there had been no marked increase in cancer, leukaemia, cataracts, or other diseases related to radiation, and there was no evidence of an increased level of birth defects, in sharp contrast to reports around the fifth anniversary of the accident late last month.

Radiation experts point out that previous experience of accidents shows that it takes more than five years for radiation-related diseases to appear.

Given the increase in the reporting of cancer cases in the Soviet Union over the past 10 years, it may be that the effects of Chernobyl-related radiation would be very hard to detect.

In Vienna today the UN's International Atomic Energy Agency will begin a four-day conference to examine the project's medical and radiological findings.

The study group was asked to assess the radiological consequences of the accident for the three affected Soviet republics - the Ukraine, Byelorussia, and the Soviet Federation - and to evaluate the protective measures undertaken by the government.

Headed by Dr Itsumo Shigematsu, director of the Radiation Effects Research Foundation at Hiroshima, the group continued on Page 15

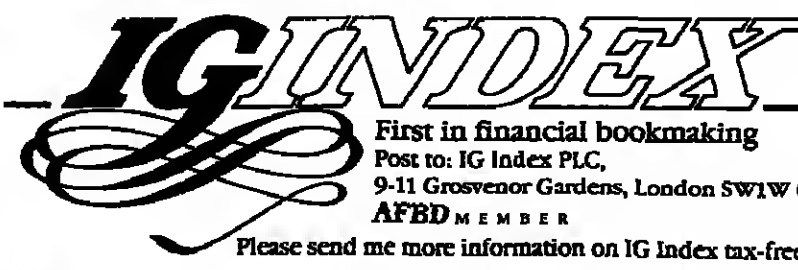
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Tokyo hoping to begin a new relationship with Brussels

EC president Jacques Delors is due in Tokyo tomorrow. Both sides want the visit to mark the start of a new relationship - one in which the agenda will no longer be led by trade disputes.

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MARKETS

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| STERLING New York lunchtime: \$1.7200 London: \$1.7180 (1.7185) \$1.7170 (2.88) \$1.7160 (2.88) \$1.7150 (2.88) \$1.7140 (2.88) \$1.7130 (2.88) \$1.7120 (2.88) \$1.7110 (2.88) \$1.7100 (2.88) \$1.7090 (2.88) \$1.7080 (2.88) \$1.7070 (2.88) \$1.7060 (2.88) \$1.7050 (2.88) \$1.7040 (2.88) \$1.7030 (2.88) \$1.7020 (2.88) \$1.7010 (2.88) \$1.7000 (2.88) | DOLLAR New York lunchtime: DM1.7270 FF1 |
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EUROPEAN NEWS

Soviet air controllers hold last minute strike talks

By Leyla Boulton in Moscow

SOVIET authorities were last night locked in last minute negotiations to avert the country's first ever strike by pilots and air traffic controllers, who threatened to close down Soviet airspace from midnight yesterday.

Mr Boris Panyukov, the Civil Aviation Minister, has said the government would bring in military air traffic controllers to keep Soviet airspace open. The government has also vowed to prosecute workers who defy a strike ban in the transport industry under a newly-created special regime for key sectors of the economy.

By threatening strike action, the country's 17,000 air traffic controllers together with 40,000 Aeroflot pilots, have already won important concessions on their demands for bigger pensions and better working hours. Negotiations last night however centred on their

demands for a 100 per cent pay increase - after the controllers and pilots dropped an initial demand for a 200 per cent pay rise.

International airline officials were on stand-by yesterday to cancel all flights to and from the Soviet Union, as well as those between Europe and the Far East, which cross Soviet airspace. The pilots plan a 24-hour warning stoppage but the air traffic controllers union have vowed to continue industrial action until their demands are met.

In a tacit admission that disruption would be inevitable even if military controllers are brought in, Mr Panyukov has said the Soviet Union would lose Rb25m and \$2m in hard currency for every day of disruption.

The threatened air strike is the first test of the government's resolve to take tough

action to ensure the smooth functioning of key economic sectors since President Mikhail Gorbachev signed a decree establishing the special regime last week.

Moscow's radical mayor, Mr Gavril Popov, failed yesterday to win a vote of confidence in his leadership and said he might resist his supporters' demands to run in free elections scheduled next month. Renter adds from Moscow.

In an unruly and chaotic session of the Moscow City Council, a majority of deputies refused to vote for Mr Popov as a candidate in elections planned for June 12 - the first democratic mayoral poll in Soviet history.

About 100 of some 450 deputies left the debating chamber to avoid having to vote. Of those who remained, only 189 cast their ballots in favour of Mr Popov's candidature.

OECD REPORT

E Europe 'must look to service industries'

By Anthony Robinson, East Europe Editor

THE development of east Europe's hitherto primitive service industries is the key to the transformation and growth of the region's obsolescent, production-based economies, according to the Organisation for Economic Co-operation and Development.

It also provides the best chance for expanded international trade and big opportunities for western financial and service companies to export products and know-how, the OECD says.

In a report entitled 'Services in central and eastern Europe', the Paris-based think-tank says the former ideological prejudice against services as 'non-productive' has contributed to low overall economic efficiency and a relatively low share of services in GDP.

High on the list of OECD needs to transform their economies is technical assistance in re-training central bank personnel to cope with new supervisory and prudential regulations and the creation of 'independent, strong, efficient and competitive' commercial banking networks. The report notes that the development of commercial banks, virtually from zero, requires people skilled in risk assessment and sound credit analysis, and will need western technical assistance and heavy investment in electronic banking and communication equipment.

Telecommunications is among the most backward service industries, with telephone lines per 1,000 people ranging from 118 in Poland and the Soviet Union to 230 in Czechoslovakia and Bulgaria, compared with almost 900 in the most advanced west European societies.

Poland and Hungary have made the most progress in drawing up legislation and creating private banking and other institutions. 'The next tasks of financial reform are the development of financial investment/insurance companies, pension funds and savings associations, an integrated money market with a unified interest rate structure and an equity market extended to households,' the report says.

While acknowledging the widespread lack of experience in international banking, it underlines the 'potential of well-educated people who, properly retrained and motivated, represent valuable entrepreneurial skills'. It warns, however, that 'liberalisation is often combined with high or hyperinflation and pervasive market disequilibria inherited from the old system.'



President François Mitterrand keeping his balance yesterday during his annual hike to the top of the Soltre Rock in Burgundy. Mr Mitterrand outflanked demonstrators who planned to waylay him on his annual Whitman 'pilgrimage'. Mr Mitterrand has climbed the rock - an impressive escarpment from one side but a gentle stroll from the other - every year since 1946 in the company of selected friends and

relations. This year he switched the date of his climb to Whit Monday, May 20, so that the crowds of journalists, admirers and demonstrators had previously spotted his family outing. The date change foiled the 150 Algerian war veterans who had picked Sunday for their demonstration. Although an ecologist demonstration picked the right day, the protesters arrived an hour after the early-rising president.

Walesa's old comrades lead assault on financial stringency

By Christopher Bobinski in Warsaw

THE Polish government is facing an increasingly uphill struggle to maintain its commitment to fiscal and credit stringency and tight wage controls.

Not only has the Solidarity trade union, which still sees the government as its own, called a day of protest tomorrow against a background of public dismay at rising unemployment and mounting recession, but the government is also expected to come under strong criticism at a special economic debate in parliament on Thursday.

Solidarity's planned work stoppage and mass meetings mark a worsening of relations between the union, under its recently appointed leader Mr Marian Krzaklewski, and President Lech Walesa.

Mr Walesa, the Solidarity movement's historic leader for nearly a decade, views the union's move as a personal affront and has rallied behind the government led by Mr Jan Krzysztof Bielecki, the prime minister he appointed at the beginning of the year.

This support enabled Mr Bielecki and Mr Leszek Bakiewicz, the deputy prime minister and finance minister, to

emerge strengthened from last weekend's meeting of senior economists in Warsaw. The meeting had originally been planned to force the government to shift towards more inflationary policies in the run-up to general elections expected this autumn. A 15 per cent devaluation on the eve of the meeting, and a promise to speed up privatisation of state companies, helped to deflect criticism that the government was not responding to changed conditions.

But they are unlikely to be enough to satisfy public opinion. The latest opinion poll shows that the electorate is swinging towards despair.

Wage controls which limit

pay rises in the state sector to 60 per cent of inflation are the most immediate target of concern. But fears that large sectors of industry are on the brink of closure are depressing the public mood. The prospect of such closures poses the greatest threat to the tight monetary policies agreed with the IMF as a condition for the recent \$1.5bn structural adjustment loan. As the pressure mounts, the government will be tempted to tinker with wage controls. It will face the hardest test when pressed to bail out state-owned industries.

Unemployment is expected to rise from nearly 14m to 20m by the end of the year and spread from the small towns to the more volatile cities.

The return to work yesterday by 20,000 copper miners in Lubin, south-west Poland, gave the government some relief. The one-week strike was the most serious stoppage this year, with miners demanding a 100 per cent pay rise. But they agreed to return to work after more money was allocated to social funds, to get round wage restraint, and were told they could seek higher wages once privatisation procedures begin this autumn.

De Benedetti tells court he had no power at bank

ITALIAN businessman Carlo De Benedetti yesterday told a Milan criminal court he lacked power during his two-months as vice chairman of Banco Ambrosiano and he did not make a profit on the sale of his stake in the bank. Renter reports from Milan.

Mr De Benedetti, chairman of computer maker Olivetti, is among 35 people accused of fraudulent bankruptcy in connection with the collapse of Banco Ambrosiano in 1982 with debts of more than \$18m.

Mr De Benedetti was vice chairman of the bank from November 1981 to January 1982, when he sold his two per cent stake in the bank and resigned. 'I was never able to obtain information (about the bank's activities)... I was not placed in a position to carry out my duties. I did not have any power,' Mr De Benedetti said in his first appearance before the court.

He said he tried unsuccessfully to find out about the operations of the bank headed by Mr Roberto Calvi, which the media dubbed 'Bancobroker' because of Mr Calvi's links with the Vatican. Mr Calvi was found dead hanging from a bridge over the River Thames in London in June 1982. Investigators have been divided over whether he committed suicide or was murdered.

Mr De Benedetti told the court he sold his shares in the bank in January 1982 for about £54m (\$42m) because it was clear he would never receive any real profit in the bank. 'I did not gain one lira,' he said.

The Banco Ambrosiano trial, which began a year ago, is expected to last for several more months.

EBRD director takes up his post

THE US executive director for the European Bank for Reconstruction and Development has taken up his position, following confirmation of his appointment by the US Senate, writes Stephen Fidler.

He is Mr William Curran, who from 1976 to 1988 was chairman of First Chicago Limited in London, the investment banking arm of First National Bank of Chicago. First Chicago was known during the period for its close links with east Europe. After leaving First Chicago, Mr Curran acted as a private financial consultant.

The appointment by the US of a banker for the 24-strong board reflects the strong private-sector orientation that the US has been pressing the bank to take.

Poland, Hungary hope for barter

The collapse of trade within the Soviet-led Comecon bloc is fanning hopes in Poland and Hungary that the Soviet Union will allow barter deals and introduce a clearing system to help overcome a crippling shortage of cash. Renter reports from Budapest.

Both measures could help spur trade devastated by the moribund group's switch to hard currency accounting and world prices this year, officials from the two countries said.

'We have already received information that the Soviet proposal has been submitted to the Soviet government that would plan to lift the ban (on barter),' said Hungarian trade official Mr Lajos Berenyi.

He also suggested the countries adopt a clearing system that would use the Hungarian forint to pay for Soviet imports to help finance Hungarian exports.

This temporary arrangement could help shore up bilateral trade until the countries get used to the new trade regime.

Both Poland and Hungary have posted large trade surpluses with the Soviet Union so far this year as they continue to find Soviet energy supplies but find many Soviet customers do not have the money to pay for imports.

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Brussels warns Yugoslavia over conditions for aid

By David Gardner in Brussels and Laura Silber in Belgrade

CONTINUED European Community aid and credit for Yugoslavia will be made conditional on the country remaining united, resolving its ethnic conflicts, and furthering economic and political reform, European Commission officials said yesterday.

The officials also made clear that Yugoslavia's hopes of closer relations with the Community hinged on meeting these conditions.

Mr Jacques Santer, prime minister of Luxembourg, which currently holds the EC presidency, and Mr Jacques Delors, president of the Commission, are to hold talks with the federal and republican governments in Yugoslavia before the end of this month, a Commission spokesman confirmed. Officials said their message would be very clear: 'If [Yugoslavia] really wants a closer relationship with the Commu-

nity then [it] must maintain the territorial integrity of a united Yugoslavia,' he said.

'The EC would find it very difficult to forge closer links with a constellation of independent republics,' he added.

However, official results from a referendum on Sunday in the western republic of Croatia, confirmed that voters had overwhelmingly opted to leave the Yugoslav federation.

Yugoslavia is seeking an association agreement with the EC like those Brussels is currently negotiating with Hungary, Poland and Czechoslovakia. These are free trade agreements designed to lead eventually to full membership of an expanded Community.

Brussels has just finished negotiating a new financial package with Yugoslavia. Spread over five years, it will give the country access to Ecu730m (\$800m) in soft loans

from the European Investment Bank and the EC development bank, and will be earmarked for roads and railway infrastructure linking central Europe to Greece. The agreement has been held up by delays in reaching a transit agreement for EC lorries, rather than the instability inside Yugoslavia.

The conditions for aid set down by the EC coincided with a statement by Washington that it had not yet 'reached a final decision' to suspend aid worth \$5m to Yugoslavia, an official said. Under the the Nikes amendment, passed by Congress last autumn, aid to Yugoslavia was subject to a six-month review which expired on May 5. The amendment linked US aid to human rights and moves towards democracy which the State Department says have been blocked by Serbia.

Spanish fuel strike causes disruption

MORE THAN 4,000 Spanish fuel distribution workers began a three-day strike yesterday, disrupting private transport and forcing the state airline, Iberia, to cancel flights as unions stepped up pressure for more pay, Renter reports from Madrid.

Long passenger queues built up at Madrid's Barajas airport as Iberia cancelled 170 flights, including 91 within Europe, causing delays of up to two hours on flights still running.

About 22,000 Iberia ground staff stayed away from work yesterday in their third 24-hour stoppage since last week when railway and telecom employees also went on strike.

Communists gain ground in Cyprus parliament

By Kerin Hope in Nicosia

BOTH the Greek Cypriot Communist Party, Akel, and the right-wing Democratic Rally increased their strength in the 56-member Cyprus parliament, according to final returns from Sunday's general election.

The result reinforces the standing of President George Vassiliou, an independent who is backed by Akel but also has good relations with Mr Glaukos Clerides, the Democratic Rally leader, particularly on handling the Cyprus problem.

Akel increased its share of the vote to 30.5 per cent and won 18 seats, up from 15 seats in the previous poll in 1985. Akel's policy of keeping its

Communist label but running new candidates with a moderate left-wing background proved more successful than expected, analysts said.

Democratic Rally retained its leading position in the House, capturing 35.8 per cent of the vote and 20 seats, a one-seat gain. The biggest upset was for the Democratic Party of former President Spyros Kyprianou, which finished with 19.5 per cent of the vote and 11 seats, a loss of five seats.

Mr Kyprianou announced that he would not take up his parliamentary seat. There is speculation that he may soon be challenged for the party leadership.

Hungary's sell-off hits hard times

Privatisation may come too late for some, writes Nicholas Denton

IT IS only as the privatisation of east European economies has moved from the realm of theory to practice that the daunting complexity of the task has become clear.

Hungary, which has gone furthest in dismantling state control of industry, is therefore finding out first that the transformation is easier said than done. Transactions have to pass through the confusing legal, financial and administrative tangle left by 40 years of communist state control.

One temptation is to cut straight through the knot, by distributing property for free, and without discrimination, to the entire population or to former owners. But Hungary, more than Poland and Czechoslovakia, has opted for the deliberate way: genuinely selling state property rather than just spreading it around.

The decision has its costs. The process is far more complicated than was ever thought, says Mr Karoly Szabo, deputy managing director of the State Property Agency (SPA), the privatisation agency, which bears the brunt of people's impatience.

'People think that privatisation is just a matter of making an advert: this is for sale,' complains Mr Lajos Bokros, the president of the Budapest Stock Exchange and board member of the SPA. In fact, every state company needs extensive legal, financial and organisational restructuring to prepare it for sale, Mr Bokros says. 'Very few people know what is involved.'

Learning has been painful. Hungary's flagship First Privatisation Programme (FPP), under which the SPA is selling off 20 attractive state companies, is running well behind schedule. When the package

was launched last September, Mr Lajos Bokros, managing director of the SPA, expected the process to be complete by the middle of this year. Instead, that is when sales are now scheduled to begin. Panoplist, a Hungarian plastics company, will be the first to go public next month.

First, the SPA was inundated by interest from western investment banks and other consultants after it made an open invitation to tender for managing the sales. On top of

that, several months have been lost, according to one agency adviser, by underestimating the time needed to audit company finances.

The agency only approached the large international accountancy firms based in Budapest at the beginning of this year. By then the annual financial reports season was already looming.

Overstretched accountants could not take on much of the work. Once they did, audits to prepare a company for sale have been taking as long as six months.

Mr Bokros says the neglect of auditing in the past 'was a bad mistake'. It has been compounded by the government's reluctance to give the SPA sufficient funding. 'Without privatisation you have no income; without income you can't get the advisers and privatisation.'

A company's value is all the more difficult to calculate in economic circumstances which are shifting as fast as those of east Europe. Advisers are selling moving targets. Take Ged-

eon Richter, Hungary's largest pharmaceuticals company. 'Last year we thought Geddon Richter and companies like that were flagships,' Mr Bokros says. But the company has now suffered from the insolvency of its important Soviet customers.

'Every week its value is decreasing. Moreover, state property was never organised by the communists with the convenience of privatisation in mind. It is not simply a question of a single, unconstrained authority sell-

narrowed gradually, according to one western adviser. Nor are government privatisation programmes other than the FPP going any more smoothly. Out of 10,000 shops and restaurants covered by Hungary's retail privatisation plan, fewer than a hundred have been sold

to the confusion over land registration, over rules for auctions and for land valuation. 'This is a jungle, a real estate jungle,' says Mr Erno Racz, an SPA director. He mentions a shop on Budapest's main shopping street whose ownership papers went back no further than five years. The location of another one, by Lake Balaton, was registered as being beneath its waters.

Besides these absurdities, officials and valuers also misjudged the market and set prices too high for what were often only rental rights. 'This privatisation is tottering in children's shoes,' says Mr Janos Simon, privatisation manager of a Budapest restaurant chain, referring to the catalogue of errors.

Mr Simon has matters in perspective, for Hungarian privatisation is suffering from little more than teething trouble. Officials do not expect to repeat their mistakes.

The SPA claims to have partially privatised over 200 of Hungary's 2,000 state companies. 'It is the speediest privatisation in history,' says Mr Bokros. The question is whether that is enough. For many companies, privatisation will come too late for survival.

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AMERICAN NEWS

Steep fall increases fears that the economy is over-heating

Mexico plunges into \$639m trade deficit

By Damian Fraser in Mexico City

MEXICO'S trade position deteriorated sharply to a \$639m (€369m) deficit in this year's first quarter, excluding revenues from maquiladoras (or bonded industries) the deficit was \$1.6bn.

Although capital flows into the country can sustain a deficit of this size, the figures represent a considerable setback and increase fears that the economy is over-heating.

In 1990 Mexico ran a trade surplus of \$830m or, excluding maquiladoras, a deficit of \$3.6bn. This in turn was a substantial deterioration on 1989, when Mexico ran a surplus of \$2.4bn.

In the first quarter of this year imports grew 37 per cent against the year-earlier period. There was no noticeable difference in the growth rate in imports of capital goods (up 35.5 per cent), consumer goods (37.9 per cent) and intermediate goods (36 per cent). Three-quarters of the growth in consumer goods imports was accounted for by increased imports of sugar, meat, and petrol products.

Over the same period non-oil exports grew 7.3 per cent and oil exports 2.4 per cent. Mexico's Ministry of Budget and Planning said the export growth was boosted by strong performance in the car, chemicals and computer industries.

However, the growth in car exports, and manufacturing exports of which it forms the biggest part, was mainly due to a substantial contraction in the first quarter of 1990 following a strike at Ford.

Mr Rogelio Ramirez de la O of the economic consultancy Escanal says Mexico will see worse figures for the third and fourth quarters of this year as the effect of the US recession on Mexican exports becomes more apparent. He believes the trade deficit for 1991 is likely to reach \$6bn-\$8bn, or \$7bn-\$8bn excluding maquiladoras.

This would imply a current account deficit of \$10bn-\$12bn, more than double 1990's outcome of \$5.2bn. This year the government redefined the value of worker remittances, thereby reducing 1990's deficit - and subsequent ones - by \$2bn compared to previous years.

Menem backtracks on regional aid scheme

By John Barham in Buenos Aires

PRESIDENT Carlos Menem of Argentina has unexpectedly announced plans to revive a scandal-ridden regional development scheme suspended last year.

Mr Menem said during a weekend visit to his home province of La Rioja in the impoverished west of Argentina that he would sign a decree allowing companies located in poor regions to claim value-added tax rebates on their purchases.

The development scheme, which cost an estimated \$800m (€460m) a year in lost tax revenues, became a notorious source of corruption as businessmen and politicians falsified documents to win tax breaks without moving their factories from the industrialised regions of Buenos Aires, Córdoba and Santa Fe.

The scheme was frozen last year under emergency legislation enacted as Argentina recovered from its second bout of hyperinflation and the government fought to stabilise the economy.

Although inflation has subsided, the government is still struggling to control its finances.

Mr Domingo Cavallo, economy minister, must produce a \$800m budget surplus this month and has refused pay rises to pensioners, teachers, health service workers and the armed forces.

Officials could not explain why the president chose to re-establish the scheme.

An Economy Ministry official said: "We know Menem has these ideas, but he has not set a date for signing the decree, which is important."

Commentators suggest the government wants to ease provincial finances in the run-up to crucial mid-term elections in October.

In many provinces the public sector is by far the largest employer and patronage is a formidable political tool.

Mr Raul Alfonsín, former president and leader of the opposition Radical party, suffered a reverse in Sunday's primary elections in the cities of Buenos Aires and Córdoba, when moderate opposition candidates defeated his candidates by wide margins.

The defeat could foreshadow further setbacks in provincial primaries to be held later this month.

Policy guru challenges US foreign commitments

By Peter Riddell in Washington

AN unexpected challenge to the US's international commitments has come from Mr William Hyland, one of the high priests of the American policy establishment and editor of Foreign Affairs magazine.

In an article in the New York Times, Mr Hyland argues that the US should start disengaging from abroad and "disparagingly" needs to take a psychological turn inward.

The nation, he argues, needs "to start selectively disengaging abroad to save resources and seize the unparalleled opportunity to put our house in order. We should avoid new entanglements in the Middle East, withdraw the bulk of our armed forces from overseas and cut back drastically on foreign aid."

There is no longer a persuasive threat that requires keeping more than 500,000 ground, air and naval forces in Europe or the Far East. Why should Americans pay to defend rich European allies, or spend \$800m a year to rent naval and air bases in the Philippines?

The impact of these remarks is all the greater since they come from a commentator, a magazine and a sponsoring body (the Council on Foreign Relations) which have been among the main upholders of the post-war internationalist and Atlanticist tradition of US foreign policymaking.

The article reflects the current debate not only about the US role in the world after the Cold War, but also about the relative balance between domestic and foreign policy.

Mr Hyland describes the Gulf War as more of a stimulant to American morale than a guide to the future. "Taking on new commitments in the Middle East and the Persian Gulf while maintaining most of the old ones in Europe and the Far East cannot be justified in face of a disastrous domestic agenda: crime, drugs, education, urban crisis, federal budget deficits and a constant squeeze on the middle class, the backbone of our democracy."

Bush urges free Cuban elections

PRESIDENT George Bush called yesterday for free elections in Cuba and met prominent dissidents on the 89th anniversary of Cuban independence. AP reports from Washington.

Mr Bush also demanded that Mr Fidel Castro, Cuban president, free political prisoners and allow the UN to investigate human rights in the country.

US relations with Cuba could improve under specific conditions, Mr Bush said in a radio message.

Collor goes 'soft' on Brazilian business

His new economy minister shows willingness to negotiate, writes Christina Lamb

THE abrupt departure of Ms Zelia Cardoso de Mello from the helm of the world's eighth largest economy has shown Brazil's business community in its true opportunistic colours.

Led by São Paulo's industrialists, businessmen have been quick to exploit the "more flexible team" which they perceive has taken over from Brazil's first female finance minister and the young academics who surrounded her.

Despite a continued price freeze, the business community has blatantly raised prices in the past 10 days since Ms Cardoso's surprise departure. They have also called for a return to the high-interest short-term "overnight" financial market abolished by Ms Cardoso. Interest rates shot up to 46 per cent a month. In another indication of things to come, senators from Brazil's north-east, in the committee to approve the new central bank governor, threatened to block the nomination unless the liquidation of their bankrupt state banks was suspended.

Such actions go a long way to explain why businessmen have momentarily forgotten the gloom of a deep recession to greet the appointment of her successor, Mr Marcellino Marques Moreira, a former banker and diplomat.

Inheriting an almost empty ministry (50 people having left), with loudspeakers outside announcing a general strike for May 22, and forced to send police into supermarkets to enforce the price freeze, Mr Moreira may have been wondering why he left the plush embassy in Washington to take the job of Brazil's sixth economy minister in six years.

However, President Fernando Collor de Mello's motives for appointing him have become increasingly clear. Escaping the chaos in Brasília



Moreira: inherited almost empty ministry

Cardoso: abolished 'overnight' market

for an official visit to Spain, President Collor took time out from an afternoon jog to tell journalists that the government's new style was "soft" - using the English word.

Moreira's appointment is a white flag to the establishment, says Mr Walder de Goes, a political scientist at Brasília University. "Collor has discovered that the anti-élite rhetoric so effective for winning elections, in which the poor are the majority, is completely unsuited for running an economy in which the main actors are the élite."

The isolation of the Cardoso team - caricatured as debating abstract theory on what has become known as the "fantasy island of Brasília" - could be sustained only if the government still had popular support or its economic policies were producing results.

But they had neither. During the past year the president's popularity has dropped from 80 per cent in favour to 51 per cent against. The economy, meanwhile, shrank 4.6 per cent.

Mr Moreira heads an older, more streetwise team, mostly members of former President José Sarney's government. Mr Roberto Macedo, the new economic policy chief, was 37-year-old Ms Cardoso's teacher. But it is more than just a generation gap. The Moreira team is already showing a new willingness to negotiate.

The task is hardly easy, though Mr Antonio Kandir, the former chief economic policy maker, claims: "We turned the economy round from chaos to a manageable state." There was clear regret in Mr Kandir's voice as, seated in his Brasília flat, where many of the ideas

but letting in two". Escaping from the freeze and returning to growth without inflation is the biggest challenge for the new minister in a government which has already spent its best bulbs.

There is another problem. Ms Cardoso's demise revealed the power of President Collor's kitchen cabinet - the friends and relations from his home state of Alagoas who surround the presidency. They played a powerful back-stage role in Ms Cardoso's removal, the final spark being a public row with Mr Egberto Baptista, the regional development secretary and close friend of President Collor, who Ms Cardoso alleged had passed a decree to benefit his brother.

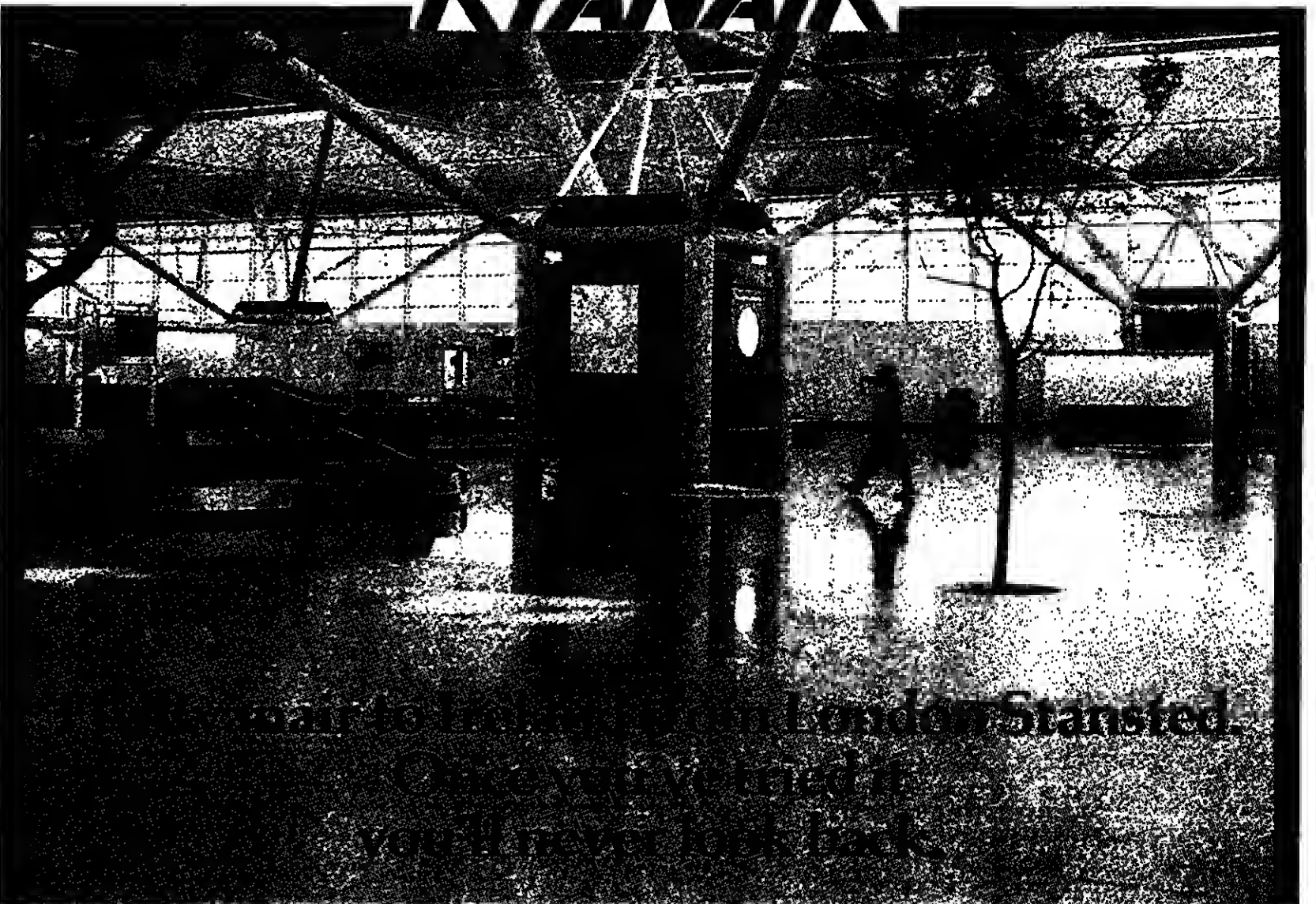
A new word - "alagoar" - has been invented in the press as a synonym for corruption and last month the construction builders' association publicly accused the government of demanding 30 per cent kick-backs. Some of Ms Cardoso's colleagues hinted that her real reason for resigning was the president's refusal to clamp down on his friends' alleged corruption.

Not only must the new economy minister resist these pressures but the chances of securing a much-discussed social pact seem minimal, with business only interested in prices, workers in wages and Congress (basically a collection of vested interests) pushing to block privatisation and state cuts which slash at their support bases.

Mr Moreira insists the austerity policy will not change, a view echoed by Mr Baptista who stresses: "It was Collor's plan not Zelia's."

Mr Moreira's great advantage is widespread confidence in him. His challenge will be to use this to persuade the Brazilians they must make sacrifices to put the economy back on track.

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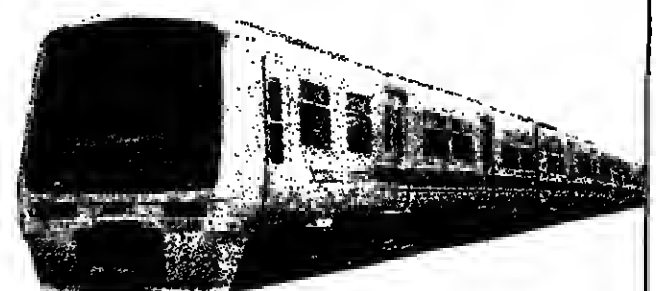
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Seamus Brennan, Minister for Tourism, Transport & Communications
Bertie Ahern, Minister for Labour
Maurice Doyle, Governor, Central Bank of Ireland

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Guyana's policy change draws foreign investors

ing off state property is no longer a party political issue. It is an irreversible fact of Guyana's economic destiny."

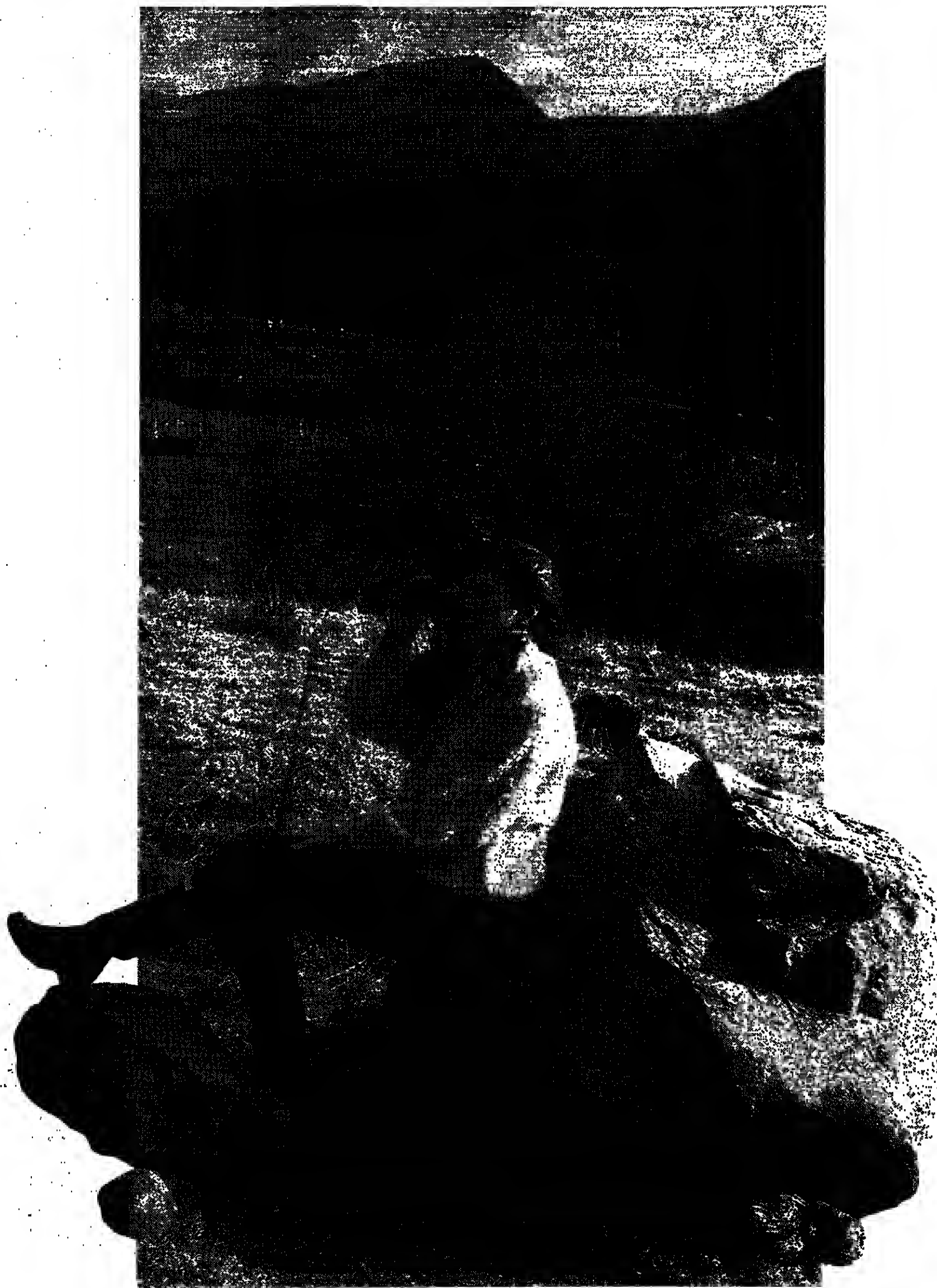
reduce prison terms of traffickers if they surrendered to authorities. Three brothers who helped run the Medellin cartel with fugitive Pablo Escobar - Jorge Luis, Juan David and Fabio Ochoa - accepted the president's offer and surrendered.

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INTERNATIONAL NEWS

South Africa reverses land claim decision

By Patil Waldmeir in Johannesburg

THE South African Government has agreed to restore land to some of the 3.5m blacks forcibly removed under apartheid, reversing an earlier decision to reject all claims for restitution.

Mr. Hennis Kriel, the planning minister, told a press conference in Cape Town yesterday that an all-party Commission would be set up to adjudicate land claims - a key demand of the African National Congress (ANC).

The decision represents a major climbdown by Pretoria, which had earlier rejected out of hand all claims by families evicted from their homes as part of the National Party's policy of confining all blacks to separate homelands.

The government acknowledged that it had responded to criticism from the ANC and others when deciding to withdraw two bills in its recent land reform package, and table a new one making provision for the Land Commission.

Details of the planned restoration remained vague, however. Mr. Kriel said that the Commission would be able to allocate land currently owned by the state (some of it purchased in order to create separate black homelands).

In addition, the state would purchase a further unspecified amount of land to satisfy claims made to the commission. He declined to say how much land might be involved, though land reform experts

said the first category would involve at least 125m hectares of land.

Mr. Kriel ruled out a blanket programme of restitution. "We cannot give a blank cheque to restore land. We simply cannot afford it financially," he said, but added: "The government is not insensitive to the cause of people or communities who were possibly disadvantaged in the past."

Any such person can take their claim to the commission, which will be appointed by the State President, Mr. F.W. de Klerk. He will be free to act on or ignore the commission's recommendations - a feature of criticism by anti-apartheid groups.

Mr. Kriel also announced that measures to protect standards in white areas would be softened, with racially discriminatory by-laws to be outlawed.

However, white owners of private land would still be allowed to reject black tenants, and local authorities may still be able to pass by-laws which effectively - if not overtly - discriminate by race. Opposition parties in parliament will oppose these measures, which could impede the bill's passage through parliament.

Ruling National Party member Mr. Piet Marais, chairman of the parliamentary land committee, said the new proposals were drawn up in consultation with groups and individuals, including the ANC.

Moderate turnout looks likely to help Hindu revivalist party

Surge in violence as Indian polling begins

By David Housego in New Delhi

THE FIRST day of polling in India's general election was marked by unprecedented violence in which at least 36 people were killed and one town in northern India was placed under indefinite curfew.

Turnout in the poll, which covered 204 of the 510 seats being contested, was moderate - a factor that seems likely to favour the more tightly organised, Hindu revivalist Bharatiya Janata party (BJP).

Yesterday's death toll adds to the more than 100 people killed during the campaign - making the election far more violent than the last general election in 1989, when 67 people died during the three days of polling.

Worst hit in yesterday's violence was the town of Meerut, north of Delhi in Uttar Pradesh, which has a long record of clashes between its Hindu and Muslim population. In yesterday's rioting in the town, in which 14 people were killed, shops were burnt and looted and mobs exchanged fire. A curfew was imposed on the town.

Rioting also took place in other towns in Uttar Pradesh with large Muslim populations including Bulandshahr, Sikandrabad and Varanasi (Benares). In Varanasi 50 people were wounded in incidents of stone-throwing and shooting, and in explosions.

Violence was, however, mostly limited to the northern states of Uttar Pradesh and Bihar, and west Bengal and Andhra Pradesh in the south. In Andhra four people were killed and five others injured when para-military forces opened fire to halt a clash



Supporters of the Samajwadi party wield guns outside a polling station in Bulandshahr in Uttar Pradesh

between supporters of the Congress party and the local Telugu Nationalist party who were throwing grenades at each other.

As a result of violence and attempted vote-rigging, polling was halted at 41 booths in

Bihar, Haryana and west Bengal, and a re-poll ordered. Election commissioner T.N. Seshan said that, despite the violence, voting had been smooth in most states: "We have been almost entirely incident-free in most places."

Opinion polls, and most political analysts, see former prime minister Rajiv Gandhi's Congress party winning the biggest slice of the 537 parliamentary seats at stake, but falling short of a majority. Polling took place yesterday

in 10 states. The second phase of the poll is on Thursday, allowing troops time to re-deploy - with the final day of voting on Sunday. Those parts of Bihar and Uttar Pradesh which did not vote yesterday will vote on Thursday.

Walesa faces up to Polish war-guilt in Israel

By Hugh Carnegie in Jerusalem

PRESIDENT Lech Walesa of Poland yesterday confronted highly emotive Jewish memories of the Holocaust and deep-seated suspicions of Polish anti-Semitism during a state visit to Israel.

In contrast with so many modern presidential visits, when attention is on the nuts and bolts of political and economic relations, the atmosphere in Jerusalem was laden with more human concerns over a bitter past.

Many Israelis are survivors or descendants of survivors from Poland where some 3m Jews died in the Second World War - the vast majority of the country's Jewish population. Many blame Poles for collaborating against them.

Not long ago, Mr. Yitzhak Shamir, the Polish-born Israeli prime minister, whose entire family died in the Holocaust, said Poles sucked in anti-Semitism "with their mother's milk". During his presidential campaign, Mr. Walesa was accused of fanning anti-Semitism through remarks that he was "100 per cent Pole" with no Jewish ancestry.

Mr. Walesa's response was to come to Israel to face the issue for himself. He was given the platform of a speech to the Knesset - an honour bestowed previously only on Presidents Sadat, Carter and Mitterrand. Referring to Nazi death camps at Auschwitz, Treblinka and Sobibor - all in wartime Poland - Mr. Walesa said: "We too were the victims of the Nazis. We helped you as much as we could."

But he also acknowledged the bitter Jewish accusation of collaboration. "Here in Israel, the land of your culture and the land of your revival, I ask for your forgiveness," he said. In reply, Mr. Shamir recalled "the glory of the Polish youth" but also "the humiliating anti-Semitism".

More mundane issues were not entirely forgotten. Mr. Walesa, apparently hopeful that ties to Israel can help Poland in its efforts to win western economic aid, said he supported the search for "justice" in the Middle East and hoped for greater cultural, scientific and economic ties.

Mubarak names new defence and foreign ministers

By Tony Walker in Cairo

PRESIDENT Hosni Mubarak of Egypt yesterday announced a cabinet reshuffle that included the appointment of new defence and foreign ministers, but to some surprise there were no changes in the economic portfolios.

The defence minister is Lt Gen. Mohammed Hussein Tantawi, 56, veteran of five wars and former chief of operations. He replaces Gen. Youssef Sabri Abu Taleh, who held the job for two years but was always seen as a stop-gap.

Mr. Mousa, 54, previously UN Under-Secretary-General for Disarmament, becomes foreign minister in place of Dr. Esmat Abdel Meguid, who was elected Arab League secretary general last week. Mr. Mousa is a highly regarded career diplomat who has long been earmarked for ministerial office.

Among other changes was the appointment of Dr. Boutros Ghali, formerly minister of state for foreign affairs, to be a deputy prime minister in charge of "foreign relations".

Boat people step up rush to Hong Kong

By John Elliott in Hong Kong

NEARLY 1,000 Vietnamese boat people have sailed into Hong Kong during the past three days in the biggest spate of arrivals since June 1989.

The arrival rate this month is more than six times higher than a year ago, and government officials believe that it has been partly caused by serious food shortages in north Vietnam, where rice is reported to be especially scarce.

About 35,000 Vietnamese arrived in Hong Kong during the peak year of 1989. Officials do not expect this year's total to go so high, but there has been a sudden increase recently.

So far this month nearly 3,300 have arrived, compared with just over 500 in the same period last year. The total so far this year is 6,700, up from nearly 2,000 a year ago.

This has sparked fresh opposition among Hong Kong's ethnic Chinese population, who object to the colony being used as a place of first asylum. Two weeks ago legislators voted against fresh funds being allocated to expand detention camps, which are designed to accommodate 54,000 people.

Hong Kong is urging the US to relax its long-standing opposition to mandatory repatriation of the boat people.

Anniversary Tibet wants to forget

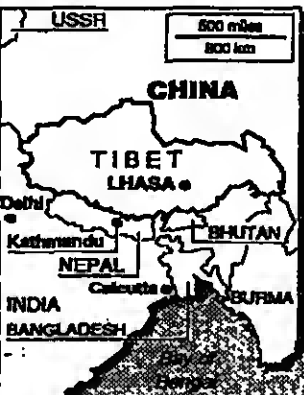
Colina MacDougall looks back on 40 years of Chinese 'liberation'

THIS WEEK China celebrates the 40th anniversary of the "liberation" of Tibet. The parties in Chinese embassies around the world will be low-key, since many potential guests have politely declined.

In Lhasa, now overhung by a new Chinese-built 70-metre monument in commemoration of the event, the Chinese have imposed a 22-hour-a-day curfew to keep Tibetans off the streets. Security men are thick on the ground and foreign journalists have been banned. The Peking media are anxiously countering western coverage of human rights abuses with stories of Tibet's feudal past compared with the peace and progress under Chinese rule.

But it is also the (uncelebrated) 11th anniversary of the visit of Hu Yaobang, the disgraced liberal party leader whose death in 1989 sparked the Tiananmen Square demonstrations. If there were no other evidence, Hu's words in Lhasa (which infuriated hardliners in Peking) would undermine any claims that China's control of Tibet has been beneficial.

Surprised to find how far living standards had dropped under Chinese rule, he called for a commitment from the central government to relieve the people's burdens, and drastic reforms which would "let



Tibetans are masters of their own lives. He also proposed genuine autonomy and the repatriation of China's many Chinese officials.

The failure to implement Hu's proposals and the continuation of China's colonial-style policies led to the Tibetan pro-independence demonstrations of the late 1980s. These have brought tough repression.

As these emotional party anniversaries approach, Peking fears a revival of protest, especially since the world spotlight has since fallen on its behaviour. Paradoxically, the "merciless repression" in Tibet called for in 1989 by Qian Qun, China's no. 3 leader, has speeded the Dalai Lama's campaign to attract outside attention. This has now succeeded to the point

that President George Bush, who previously resisted direct contact to avoid angering the Chinese, accorded the spiritual leader a meeting last month.

This week's festivities are specifically in honour of the signing on May 23 1951 of the "17-point agreement" which in effect annexed the previously-independent Tibet to the People's Republic.

It is surprising that China should want to call attention to the 17 points, to which it has scarcely adhered. The controversial agreement was forced on a Tibetan delegation to Peking, when Chinese troops had already wiped out most of the inexperienced Tibetan army and occupied eastern Tibet (now mainly part of Sichuan province). The Dalai Lama acquiesced in the agreement, fearing the slaughter that would fall on Lhasa if he refused.

The 17 points set out a framework for the future status of Tibet (leaving more than a passing resemblance to the Sino-British Joint Declaration on the future of Hong Kong) which included provisions that Peking would not change the existing political system, alter the status of the Dalai or the Panchen Lama or compel communist-style reforms. It also guaranteed freedom of religion.

Initially Tibet did get cautious treatment from Peking but this did not last long. The Tibetans in Sichuan resisted the imposition of Chinese policies, and sporadic revolts broke out which ended in the flight of the Dalai Lama to India in 1959. That was swiftly followed by the full absorption of the "Tibet Autonomous Region", as it came to be called, into China's centrally-ruled political system.

Famine and violence followed as Tibet was subjected to Maoist policies, notably the Cultural Revolution. Food shortages killed many, and by 1980, only a dozen or so of the region's 6,000-plus monasteries and temples, the repositories of Tibetan culture as well as religion, were left standing.

In the early 1980s, inspired by Hu Yaobang and the nationwide move to reform, Peking did debate Tibetan issues, abolish the commune system and give grants for economic development. Some monasteries were repaired, religious practices were resumed and education given a small boost. Tourism increased and, in the rural areas particularly, life improved.

But the move to send home Chinese officials did not materialise. In fact, economic development since has had the reverse effect. Chinese immigration into Tibet soared.

The new jobs in civil engineering, tourism and agriculture have gone to Chinese, not Tibetans, who did not have appropriate training.

Peking is investing yuan 1.3bn (£142m) in projects such as airport expansion and roads, on top of yuan 150m since 1989. This is not entirely disinterested since, while these projects may be of general economic benefit, they have an obvious use in a strategic border region which is heavily militarised. It is also exploiting Tibet's rich minerals and forestry for use in China proper.

So far, the motive of the Chinese seems to be to maximise Tibet's usefulness more than to benefit the Tibetans. Their public celebration of the 17-point agreement suggests they are unlikely to loosen their grip on this most valuable, if troublesome, territory.

Iraqi secret police still at large

US troops make ready for Kurds to return

By John Murray Brown in Dohuk, northern Iraq

US TROOPS entered the city of Dohuk in northern Iraq for the first time yesterday, to prepare the way for the possible return of the thousands of Kurdish refugees still stranded on the Turkish border or camped in the security zone set up by the allies.

A military convoy led by US amphibious vehicles accompanied a team of US disaster officials and experts from Britain's Overseas Development Administration who moved into the provincial capital to assess the public services, badly damaged during the crushing of the short-lived Kurdish uprising last March.

Dohuk, which is just south of the allies' security zone, is considered central to the allies' plans to return refugees to their homes. More than 200,000 come from the city.

One US official estimated yesterday that fewer than 10,000 had so far returned.

After meeting with Iraqi officials, Gen. Jay Garner, the US commander, said the city "should present a secure feeling for the returning Kurds". However he said no decision had yet been made for the US to help restore the city's infrastructure.

The Iraqi military has withdrawn three miles south of the city as agreed with the allies. However coalition officials said security was still a problem.

Major Julian Baxter, the UK officer representing in talks with the Iraqis, said there was

still a worrying number of Iraqi secret police still in the city, perhaps as many as 400.

Iraqi officials are clearly keen to play down the extent of the city's damage. Since reaching agreement over the weekend a number of Iraqi doctors have been sent to the city hospital.

Ten UN guards, patrolling the streets in baseball hats and carrying Smith and Wesson revolvers, were yesterday an object of some local curiosity.

Mr. Stefan Demistura, heading the UN mission said the decision to arm the guards was "useful for psychological and traditional reasons... But the best weapon we have is our blue shirt and our UN flag," he said.

The 10 officers are the vanguard of 400 to 500 UN security men to be stationed throughout Iraq as a confidence-building measure.

Mr. Fred Cuny, leading the 12-member US civil affairs team, said he was concerned at the state of water supplies and the number of houses destroyed. On one approach road to the city centre whole streets had been turned to rubble.

Mr. Cuny said that perhaps as many as 800 homes had been destroyed.

Allied officials estimate that only half the city's water supply system is working. Food is also scarce, although the UN is bringing in 300 tonnes of provisions.

Lagos returns to central controls on banks

William Keeling reports on a plan to help ailing industry and defend the currency

NIGERIA'S banking sector has had a turbulent start to the year, with the government caping lending rates and initiating a fierce liquidity squeeze.

Central bank officials say that the measures were needed to help a troubled manufacturing sector and halt depreciation of the naira, which had fallen 20 per cent in five months. Bankers say the measures mark a return to central control and run counter to the principle of de-regulation, which has guided the government's five-year economic structural adjustment programme.

However central bank officials say that in 1990 banking irregularities emerged which had to be tackled. In the last six months of last year, lending rates rose from 21 per cent to 31 per cent, with a gap of up to 10 percentage points between lending and deposit rates.

As one central bank official noted, "such a wide margin between the deposit and lending rates was not in the spirit of deregulation". Critics of the banks say that they have exploited deregulation - sometimes illegally - and in so doing are undermining the chances for overall economic recovery.

Bankers argue that while they make use of economic distortions, such distortions are usually of the government's making. An example cited is the differ-

ential between official and autonomous exchange rates which bankers have exploited by round-tripping funds, buying foreign exchange at the official market and selling in the parallel market.

A second distortion has resulted from the central bank placing tight credit ceilings on the sector. This had, until interest rates were capped, allowed banks to keep lending rates high in the face of excess demand for credit.

The profit potential of the sector has led to its rapid growth, with the number of commercial and merchant banks rising from 83 at the end of 1989, to about 115, with at least another 30 applicants waiting to join the fray.

The central bank has faced problems both in controlling the extra liquidity each new entrant brings to the sector and in monitoring the professional practices of the banks. As one commercial banker explained, "last year we had something very close to an oligopolistic situation. For instance, the banks effectively pegged their interest rates at a self-determined level."

Hardest hit by the high cost of borrowing was the already depressed manufacturing sector. High interest rates have also been blamed for the low level of new direct investment in the economy. The decision to cap interest rates at 21 per cent was initially welcomed by manufacturers but the measure had an inevitable knock-on effect on the exchange rate.

The naira, which had held steady at about eight to the dollar throughout most of last year, slid to less than 10 to the dollar by mid-March. For the manufacturing sector, which is heavily import-reliant for inputs, the benefits of a lower cost of borrowing were all but wiped out.

The central bank responded by squeezing liquidity in the banking sector and, over a two-week period, almost tripling the amount on offer at the auction.

It also banned 18 banks from the auction for four weeks because they failed to cover their bids with sufficient naira funds. Bankers doubt, however, whether the moves will have more than a short-term effect.

While the naira did appreciate to 8.7 naira to the dollar at the end of March, it has already slipped again to more than 9 to the dollar. And although activity on the parallel market is subdued, the autonomous exchange rate has remained steady at about 12.5 to the dollar.

Bankers argue that if exchange rate stability is to be achieved, the central bank would do better to fine-tune its auction system. Those banks making the lowest bids currently fail to win foreign exchange which, bankers say, has tended to force up the rate.

The central bank also stipulates that customers on whose behalf the banks

bid must not be charged more than an additional 10 per cent over the value of the bank's bid.

With demand for foreign exchange outstripping available supply, those banks which bid highest profit the most.

Bankers say that the central bank has not been receptive to alternative suggestions. As one banker said, "we told the central bank last year that they should make us sell at a fixed rate above the weighted average of bids. That way those who bid low benefit and those which bid too high will have their profits cut."

Instead, while the intention may have been to limit the excesses of the banking system and to assist manufacturers, the government has adopted an exchange rate exhibiting a large degree of central control. And this policy has implications outside the banking sector, particularly for manufacturing and agricultural exports, which the structural adjustment programme had tried to promote.

Bankers argue that present government policy is likely to backfire. Many companies are now using subsidiary finance companies to lend funds on, in order to break the interest rate ceiling, and the gap between the official and autonomous exchange rates, currently almost 40 per cent, has increased potential profits for banks which engage in the illegal round-tripping of funds.

REPUBLIC OF TÜRKİYE PRIME MINISTRY PUBLIC PARTICIPATION ADMINISTRATION (PPA) ANNOUNCEMENT

Republic of Türkiye, Prime Ministry Public Participation Administration (PPA) offers to sell its 30% share in GÜNES SİGORTA ANONİM ŞİRKETİ (GÜNES SİGORTA) (insurance company) as a whole or in part under the Privatization Program.

- Information about this company can be obtained from PPA, from the address shown below.
- The sale of PPA shares in GÜNES, SİGORTA will be effected by inviting tenders and holding sale negotiations.
- The tender and an irrevocable - unconditional bid bond for 1,000,000,000 TL addressed to PPA, payable on first simple demand with a tenor of at least 6 months should be submitted to PPA no later than May 29, 1991 by 6.00 PM official local Turkish time.
- In the tender, the percentage of shares to be purchased and the offered price for these shares will be specified.
- The tender should be submitted in a closed envelope with the following inscriptions:
"Tender for GÜNES SİGORTA A.Ş. - CONFIDENTIAL"
- The successful bidder shall furnish a performance bond for the amount of 6% of the agreed sale price and a letter of intent comprising the price and the terms of the sale. If the letter of intent is not submitted or if the bidder fails to sign the sale contract after the submission of the letter of intent and/or fails to provide the performance bond until the closing date to be determined by PPA, the bid bond will be called by PPA.
- PPA is not subject to the State Tender LAW No: 2886 and reserves the right of not selling any or part of its shares or to sell based purely on its own choice without any obligations at any time.

T.C.
BAŞBAKANLIK
KAMU ORTAKLIĞI İDARESİ BAKANLIĞI (PPA)
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WORLD TRADE NEWS

US 'likely to take tough line on China trade'

By John Elliott in Hong Kong

THE US is likely to impose onerous conditions on any extension this year of China's most-favoured nation (MFN) trading status, according to a group of Hong Kong-based US businessmen who have recently held high-level meetings in Washington.

This is a far more pessimistic forecast than had been expected and is causing serious concern in Hong Kong. The colony's viability as a trading and financial centre depends heavily on China's international business, and its manufacturing sector is heavily dependent on the Chinese market.

Estimates suggest that an ending of the MFN status could wipe out up to 2 per cent from Hong Kong's annual economic growth rate, which this year is forecast to rise by 3.5-4.5 per cent.

Some 40,000 to 50,000 jobs might be lost in companies linked with southern China.

Mr Warren Williams, president of Hong Kong's American Chamber of Commerce, said yesterday he had returned from Washington "much less

confident" that President George Bush could eventually push through a renewal of MFN without imposing conditions that would be unacceptable to China.

After meetings with senior White House officials, leading congressmen and departmental officials, he realised there was a "deep-seated feeling in all quarters" that China had done nothing to earn an unconditional extension.

"In all probability, MFN will not be extended without conditions. That is where my money would go. It was heading on the issue right now. The battle is just beginning to be fought, and it is going to be a battle," said Mr Williams.

Mr Bush has to make his first move on renewing MFN by June 30. He has indicated his personal backing for such a step. But his opponents cite issues such as China's trade surplus, which is forecast to reach \$15bn (\$8.6bn) this year, Peking's poor human rights record, protectionist policies on intellectual property, export of products made by prison labour and arms sales.

UK may lose part of £400m Brunei arms deal

By David White, Defence Correspondent

A BRITISH deal to supply up to 2400m to Brunei has been held up for more than 18 months after being agreed by Mrs Margaret Thatcher, then the UK prime minister.

No firm contracts have yet been signed and part of the deal could be lost to German or Italian suppliers.

Mrs Thatcher signed a protocol covering the supply of aircraft and naval vessels with Sir

Muda Hassanah Bolkiah Mu'izzadin Waddanah, the Sultan of Brunei, during the Commonwealth Conference in Kuala Lumpur in October, 1988.

The proposed deal involves the supply of 16 British Aerospace Hawk aircraft, some of which would be two-seat trainers and others single-seat fighters. The Sultanate does not have any fixed-wing aircraft in its air force, only helicopters.

This part of the package is

estimated to be worth £200m including spares and training. BAE said yesterday it was still counting on completing the deal but contracts had yet to be finalised. The precise mix of trainer and fighter versions had to be determined.

The Southampton-based Vospers Thornycroft shipyard was expected under the government-to-government agreement to supply three Vigilance-class corvettes or large offshore

patrol vessels, worth up to a further £200m including support.

The shipyard, heavily dependent on export orders, received a setback last summer when Brunei said it planned to re-open the corvette purchase to international competition. It is understood, however, that no invitations to tender have been issued.

The potential competition would pit Vospers Thornycroft

against the rival British yard Swan Hunter of Tyneside, which confirmed yesterday that it was certain to bid if invited. Other bidders expected to bid are Lärssenwerft and Bremer Vulkan of Germany and Fincantieri of Italy.

Delays in the Brunei deal echo difficulties over a 1988 British arms package for Malaysia, which dropped a plan to buy Tornado combat aircraft in favour of the cheaper Hawk.

Cairns Group still at odds with EC

By Kevin Brown in Sydney

THE EUROPEAN Community and the Australian-led Cairns Group of agricultural exporting nations within the negotiations of the General Agreement on Tariffs and Trade appeared firmly at odds yesterday after talks in Canberra failed to break down differences over trade liberalisation.

Australian ministers pressed for big cuts in subsidies to European farmers, which the Cairns Group blames for the collapse of the Uruguay Round of the Gatt negotiations in Brussels last year.

However, Mr Frans Andriessen, the EC external relations and trade commissioner, warned the Cairns Group against pressing too hard for changes to the Community's Common Agricultural Policy.

"When you put the stakes too high, you risk not getting what you want to get," Mr Andriessen said after the meeting.

Mr Andriessen said US moves towards "fast track" approval of Gatt agreements indicated that the round could be concluded successfully at the end of the year.

He also said that proposed changes to the CAP would reduce European production, but warned that subsidies would always be necessary within the EC.

Study finds that Japanese consumers pay the price

By Robert Thomson in Tokyo

A JOINT US-Japan study has found that the same German spark plug is four times more expensive in Japan than in the US, that British jam was more than twice as expensive in Japan, and that prices of comparable products are on average 37 per cent higher in Japan.

The study was released yesterday during talks between US and Japanese officials to review progress in the Structural Impediments Initiative (SII), which was launched two years ago in an attempt to remove "structural" barriers to bilateral trade and to reduce Japan's huge bilateral surplus.

A similar price study conducted in October 1989 found that products were 30 per cent more expensive in Japan than in the US, and Mr Michael Farren, the US under-secretary of commerce, said the new results suggest that Japanese consumers pay unfairly high prices and that imported products still

face significant obstacles in Japan.

"What you see in these prices is a lack of competition," Mr Farren said. He suggested that the multi-layered Japanese distribution system and the monopolistic tendencies of Japanese corporate groups contributed to the higher prices, which should provoke consumer debate within Japan on needed reforms.

Of the 112 products surveyed by Japanese and US government researchers, 87 per cent were more expensive in Japan, and of the 40 products made in Japan, 12 were more expensive in Japan, including a bottle of sake, which was 44 per cent more expensive than in the US. The survey also included 20

European, of which 19 were more expensive in Japan than the US.

US officials want to use the two-day SII talks as an opportunity to press Tokyo for increased monitoring of the

allegedly unfair trading practices of the Japanese corporate families known as *keiretsu*. They also want further reforms to the distribution system, and tougher anti-monopoly legislation.

Japanese officials are disappointed by the US response to SII. Mr Koji Watanabe, the deputy foreign minister, began the talks yesterday with a comparison between the numerous changes introduced by the Japanese government and the relative inaction in Washington, which has insisted that the initiative is a "two-way street."

However, Mr Farren defended the US performance, and Washington's failure to keep a promise on reducing its budget deficit was due to the unexpected impact of US savings and loan crisis. He said that promised action had been taken in education reform and export promotion.

US Vice President Dan Quayle yesterday heard hints from Prime Minister

Toshiaki Kaifu that Japan might ease its ban on rice imports, officials said, AP adds from Tokyo.

Mr Quayle also pressed for Japan to buy more US vehicles and auto parts, and thanked Japan for its financial aid to the allies' war against Iraq and to Nicaragua's transition to democracy.

A Japanese Foreign Ministry official said Mr Kaifu hinted at a breakthrough in stalled international trade talks by saying Japan would be willing to work out the dispute over its ban on rice imports as long as other countries also worked out their "difficult issues" in the talks.

The trade talks broke down in Brussels last December over agricultural issues. Japanese law bans rice imports on the premise that Japan must be self-sufficient in its staple food. Japan's powerful and heavily subsidised farm lobby says it cannot compete with cheaper rice imports.

UK intervenes over Malaysia power dam

By Lim Siong Hoon in Kuala Lumpur

THE UK government has intervened to unblock the contract for Malaysia's largest hydro power dam, stalled by a dispute over repayment terms between UK financiers and Tenaga Nasional, the project's owner.

Mr Malcolm Ian Sinclair, the minister for state at the British Foreign and Commonwealth Office, met Malaysian officials in Kuala Lumpur last week. But the Pergau project remained in abeyance nine months since its construction and supply contract was awarded to British contractors.

The dispute centres on the privatisation of Tenaga, the electricity monopoly, which raised doubts about whether it qualifies for cheap, and subsidised commercial credit from the UK.

Without the credit, the M3.5bn (\$380m) contract to Balfour Beatty and Cementation, the construction unit of Trafalgar House, is in jeopardy. UK financiers are refusing loans at around the 0.5 per cent interest rate which Tenaga is offering, offering about 10 per cent instead.

Following Mr Sinclair's visit, however, the Malaysian government was still holding UK to its word for the soft loan, it says, as part of Pergau's construction and financing package. Failure of the deal could have political repercussions in UK-Malaysia relations since Pergau is associated with the heart of improving economic ties.

The contract, the largest received by any UK company, has come to symbolise the revival of British commercial interests in local government contracts withheld during the "buy British" policy days of the early 1980s.

The present controversy emerged after September 1 when Tenaga's legal status changed from a crown corporation, accountable to Parliament, to a private entity owned, almost 100 per cent, by the government.

Pergau had been on the pipeline for four years or more, and much of the negotiations were carried out before the change.

In return for the construction loan, Pergau was to provide financing in two tranches:

65 per cent, or about £200m, of the contract value in soft, commercial credit. The balance, called the "UK content," is non-repayable British government grant.

According to one senior manager, Tenaga had the option to combine the two financing elements into a single, apparently even cheaper, commercial loan repayable in 15 years after a five-year grace.

Financing details was to be set up within three months of the award so that the entire deal would be ready by December. Completion of Pergau, near the Malaysian-Thailand border, is 1996 after 50 months.

It seems unlikely UK financiers were unaware of Tenaga's impending change; J Henry Schroders Wagg, the UK financial group which acted as adviser, had helped "unravel" the deal's privatisation.

Malaysia seems inclined to view Pergau as a government-to-government deal, insisting that nothing ought to have changed. Tenaga's public sale had been put off twice from December 1988 to next March, then May, Tenaga says the postponement was necessary for an independent audit of the group's assets. It has been estimated at around M\$1.1bn, of which a divestiture stake of 25 per cent is plausible, according to one analyst.

Tenaga's annual revenues have risen steadily by around 7 per cent over the past four years. But its 1990-91 forecast profit is expected to fall from M\$870m to M\$800m, affecting thus its offer price.

Long-term debt, at M\$6.5bn, is 100 per cent of equity though, with yearly capital expenditures expected to double to M\$2bn this decade, the ratio could rise.

Tenaga has 4,900 MW in installed capacity and plans to add 3,000 MW, including Pergau's 600 MW, over the next five years. For its previous capital expenditures, Tenaga had relied on inexpensive credit from organisations like the Asian Development Bank.

There is talk now that, while the Pergau deal remains blocked, the contract value has fallen by 35 per cent to M\$1.2bn.

Multinationals warning to Brazil over free zone

By Victoria Griffith in São Paulo

DOZENS of multinationals have threatened to suspend operations in the Amazonian free trade zone of Manaus if the Brazilian government does not raise the area's import quota soon.

"The free zone" is experiencing its worst crisis ever," said Mr Ricardo Botelho, spokesman for BASF, Brazil, which manufactures video tapes in the region.

"We may close down our Manaus factory at any moment," said Mr João de Aquino Rotta, institutional director of Philco, the television and video cassette manufacturer.

In addition to BASF and Philco, some 50 multinationals have filed complaints over import quotas with the superintendence of the Manaus free zone, according to Mr Alfredo Naschimoto, the organisation's president. The zone has been fighting to maintain viability since the government decided to begin lowering tariff barriers in the rest of the country last year. With Brazil's move to freer trade, Manaus has lost its

privileged status as a duty-free area.

"The conditions which made us invest in Manaus are just not there any more," complained Mr Botelho, whose group has put \$37 million into its Amazonian factory since 1989. "Lower tariffs in the rest of Brazil have wiped out our domestic sales advantage."

Manaus has also experienced dramatic surge in labour costs over the last two years. According to Mr Botelho, Amazonian labour was once 40 per cent cheaper than at the company's São Paulo factory. Today, it is 20 per cent more expensive. Rising costs led BASF's Amazonian factory to suffer a \$15m loss last year.

Hampered by stiff competition and high wages, multinationals in Manaus are counting on lower input costs to pull them out of the crisis. They are pushing for an increase in this year's import quota from \$1.2bn to at least \$1.6bn. Cheaper materials from abroad, say the companies, will make them more competitive both at home and in foreign export markets.

Leading through Flexibility and Innovation

Casio Computer, a leading consumer electronics maker, is closely tracking changes in world markets and customer needs to reap the benefits these changes will bring.

Kazuo Kashio, president of Casio Computer Co., Ltd. in Tokyo, and Dick Rayner, managing director of Casio Electronics Co., Ltd. in London, explain.

By Russell McCulloch

McCulloch: Casio's business results during last fiscal year were excellent. Which divisions contributed most to your increase in sales?

Kashio: Our sales of watches and musical instruments were especially strong last year. In our watch division, we have always maintained that watches represent the most useful and the most comfortable form of personal equipment which everybody owns. We are making watches more functional by incorporating sensors which measure changes in temperature, atmospheric pressure and so on. Later this year we will be launching a new range of "BP Monitor" watches which, for the first time anywhere, will enable people to easily check their blood pressure. Last year, we introduced stopwatches which are precise to 1/1000th of a second. Our reputation for innovative technology and precision have contributed greatly to the success of our watch sales.

New Sensor Watches to be Unveiled

Last year was also a very good year for our musical instruments and we have just begun marketing a brand-new range of electronic pianos which has a built-in compact-disc player which allows performers to play along with their favourite CD recording and full orchestra accompaniment. By adapting existing technologies and developing new ones, we have been able to record spectacular growth in this area. Over the last ten years our accumulated sales have reached some 30 million units.

McCulloch: Where does Casio rank in terms of market share in Europe and the rest of the world?

Kashio: Our range of products is very broad but we lead in almost every field. In calculators, we are the leader both in Europe and throughout the world. As for scientific calculators, we are first in this sector, as well, because most schools are using our calculators.

Leading in Europe and the World

As for watches, both digital watches

and combination watches, are No. 1 in Europe. In musical instruments, I can confidently say that we created an entirely new market niche with our electronic keyboards, so our market share is very high for these, as it is for electronic cash registers and personal "pocket" colour TVs. For all of these, Casio was the original developer of these products and this is why we lead in market share.

McCulloch: Does this apply in the UK as well?

Rayner: Casio's position in the UK is a reflection of Casio's position throughout the rest of Europe. In calculators, we dominate the High Street market as well as leading the education market with our scientific calculators.

For digital watches, we are almost the only digital watch in the general consumer market. And because we actually created the home market for keyboards in the UK, we began with a dominant position and have retained our leadership ever since.

McCulloch: How have you been able to maintain that dominant position?

Rayner: We've been able to set the pace and keep our lead because of a combination of factors.

Price, Timing and Sales Backup are Crucial

Firstly, the products have to be right for the marketplace and timing here is crucial. By keeping abreast of market trends, Casio is usually the first to launch new and innovative products and this usually leads to dominance. Secondly, pricing has to be in line with market trends and demands, and again, Casio's prices are always competitive. Lastly, distribution and after-sales service have to be correct to present the product for consumers to purchase and then to keep them satisfied with performance once they've made the decision to buy. I think we do all of these things quite well.

McCulloch: What factors do you think have contributed to your success in Europe?

Kashio: The most important goal for

a manufacturer and exporter in any market is to establish a network of sales and distribution bases in key market areas, and this is what we have done. We have Casio Electronics in London handling sales throughout the UK and Casio Computer in Hamburg covering sales and distribution in Germany. For other countries in Europe we have accredited distributors, and their activities are coordinated by Casio Europe from Amsterdam. In Eastern Europe, we now have local offices in Budapest and Berlin, so I think we are well represented throughout the continent. This has been a major reason for our strength in the European market.

McCulloch: How do you view the unification of the European market in 1992 and how are you positioning Casio to take full advantage of the integration?

Kashio: The formation of a single market in Europe will represent a major event in world history. This is something which Casio is watching very closely. This kind of market integration may well be repeated in other parts of the world among regional trading blocs and so from that point of view we will be monitoring the situation very carefully to see what advantages this might offer for our business. As one preparatory measure, we have altered the structure of our Export Division and created a Europe Division which will enable us to swiftly cope with any changes occurring there which might affect our operations.

McCulloch: Is Casio examining the possibility of establishing manufacturing bases in Europe?

Kashio: When we look at offshore production facilities, we have to consider the benefits both in terms of production costs and marketing opportunities.

New Plants in Malaysia and Japan

Casio has recently established manufacturing operations in the US and Mexico and later this year we will be opening a new plant in Malaysia. And, at the moment we are preparing to open our new factory in Japan in Kochi Prefecture on



Mr Dick Rayner, Managing Director, Casio Electronics Co., Ltd.

Mr Kazuo Kashio, President, Casio Computer Co., Ltd.

Shikoku Island. So, of course, we are trying to establish a worldwide network of manufacturing facilities which will increase our competitiveness and strengthen our sales base. So far, as Europe is concerned, we are ready to set up production facilities there at any time, but I think it is important that we first wait and see how the process of market integration is achieved before deciding.

McCulloch: Finally, given the success Casio has had to date in so many product areas, where will your focus lie in the future?

Kashio: Generally speaking, until now Casio has been an "innovation driven" company in that we come up with new ideas or inventions and then refine them into products for the marketplace. While Casio will continue to be an innovative manufacturer of consumer items, I would like to reverse this order by making product development more closely attuned to changing market demands.

'Personal Automation': New Growth Area

We are already achieving this with our digital diaries in the area we call PA or 'Personal Automation'. Our diaries have been very successful both in Japan and overseas, and we foresee huge growth in this sector in the future. But, at the same time, users are demanding much more of their diaries. Our aim is to transform them into Personal Terminals so that they can be easily linked to personal computers and the data up-loaded. In this way, our diaries will become an integral part of modern business activity. This is what I mean by tailoring our products closer to market needs. As a leader in the field, Casio is in the best position to create entirely new markets for a range of PA products while still maintaining our lead and we are already working to realise this objective. Although PA has been an important pursuit for Casio for many years, on April 1 this year, we established a special PA division at our Hamura, Japan R&D Centre, together with a PA sales task force, which is based in our Tokyo head office. With this major organisational change, I am confident that we can capitalise on changing consumer demands.

CASIO

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UK NEWS

Sony to build £147m plant in Wales

by Michael Skapinker

SONY of Japan will today announce that it will build a £147m television factory and research and development centre in south Wales, employing 1,400 people.

The site at Pencoed, Mid Glamorgan, was chosen in preference to Barcelona, where Sony already has a manufacturing site. The plant will complement Sony's 18-year old facility at Bridgend, also in Mid Glamorgan.

The Sony investment will be the highest in a new factory so far in Wales, exceeding Toyota's £140m engine plant on Deeside or Bosch's £100m-plus alternator plant outside Cardiff, the capital.

The decision to build the factory in Pencoed follows a visit to Tokyo last November by Mr David Hunt, Welsh secretary, and Dr Gwyn Jones, chairman of the Welsh Development Agency, to press Sony to expand its Welsh operation.

The new facility will also carry out research, development and design of new colour televisions, computer displays and broadcasting equipment.

Although the UK has been successful in attracting Japanese television manufacturing investment since Sony built its Bridgend factory, the companies have tended to base R&D in Germany. Sony is expected to announce today, however, that Pencoed will be its leading television research and development centre in Europe.

In opting for south Wales over Barcelona, Sony is thought to have been influenced by the high quality standards achieved at Bridgend.

Minister rejects calls to slow pace of health reforms

By Lisa Wood, Labour Staff

MR WILLIAM Waldegrave, the health secretary, yesterday told the largest group of workers in Britain's state-run National Health Service (NHS) that he was not prepared to slow reforms, including approval of more self-governing hospital trusts.

His first big speech since the outbreak last week of a fierce political row over the reforms was given a lukewarm, rather than hostile, reception by delegates at the Royal College of Nursing's (RCN) annual congress in Harrogate, northern England.

With no sign, however, of any let up in the pace of the pre-election battle between the Conservatives and Labour, the NHS is still expected to be the subject of clashes in the House of Commons today between Mr John Major and Mr Neil Kinnock. Ministers said yesterday they are determined to maintain their charge that Labour had "lied" about the NHS reforms to win last week's Monmouth by-election.

The reforms are based on a policy allowing state-run hospitals to take control of their own finances by opting out of local authority control.

Mr Waldegrave said it would be wrong to heed calls from organisations, including the RCN, to slow devolution of management to NHS trusts and reforms of NHS finance.

"The uncertainty and confusion would be far worse from

the failure of leadership than are the difficulties and strains we face in a swift transition to a new system," he said.

"It would be far worse for health service workers of all kinds if the wholly predictable and predicted uproar at the beginning of the changes we are introducing led us to turn back and leave the service and all who work in it with no sense of direction or leadership at all."

Mr Waldegrave, who has seen the future of the health service change as one of the most fiercely contested issues in the run up to the general election, defended the introduction of an internal market in the NHS.

"It is right that we should be building a system where the money goes where it can provide most care," he said.

"It is too important to allow ourselves the luxury of wasting anything."

Politicians who promised unlimited money were telling lies, he added.

Professor June Clark, in her presidential speech to the congress, said: "The reality is that the rough discipline of the market is producing unforeseen consequences which are already causing suffering to patients, chaos in the service and great anxiety."

Nurses believed health services were a basic human right, not commodities to be bought and sold in the market



Pointing the way: William Waldegrave indicates that there is no turning back at yesterday's RCN conference

place, she added.

Mr Waldegrave announced an 8 per cent increase in student bursaries from September and an extra £3.2m for units pioneering new nursing practices.

Ms Christine Hancock, RCN general secretary, told a press conference Mr Waldegrave came bearing gifts because he knew he was in trouble. But nurses were still angry.

Commenting on claims that

at least one London hospital would close because of the reforms, Mr Waldegrave later said: "At the right time, we will, of course, have to intervene and smooth the re-organisation in London to make sure that teaching and research are properly safeguarded."

The government's plans were, however, condemned yesterday by Mr Rodney Bickerstaffe, general secretary of the public service union

Nupe, who said that the pay and conditions of health workers were being badly affected by the NHS reforms.

Speaking at his union's conference Scarborough, north east England, Mr Bickerstaffe claimed that changes to employment conditions in self-governing trusts such as the ambulance services of Humberside and Northumbria were damaging the interests of workers.

He said a "behind of local negotiations was being put in place of the service". Lincolnshire has declared a pay cut for temporary staff, while Northumbria has offered a 21 per cent rise to emergency crews working 12-hour shifts.

The Nupe conference also called for the abolition of national structures for the trades councils which act as local pressure groups for union members.

Mr Norman Tabbitt, the former Conservative party chairman, will argue in favour of disestablishment of the Church of England in a television programme to be broadcast today. The Labour party has pledged to abolish the House of Lords.

Mr Benn said he hoped to "build up a head of steam outside parliament" for his bill by sending copies to trades unions, constituency parties and political organisations.

In a speech to the House of Commons, Mr Benn said the debate on constitutional reform cut across party lines. He said people were interested because they wanted parliament to serve them.

His bill would terminate the constitutional status of the Crown and the House of Lords.

Radical law would abolish monarchy

By Emma Tucker

A BILL to replace Britain's unwritten constitution with a written version was presented to parliament yesterday by Mr Tony Benn, the opposition Labour party MP and long-time campaigner for constitutional reform.

The bill, which stands no realistic chance of becoming law, includes provisions to abolish the monarchy, lower the voting age to 16, introduce equal representation of women in parliament and end British jurisdiction over Northern Ireland.

Mr Benn said many of the bill's provisions, such as abolishing the House of Lords, disestablishment of the Church of England, and setting up national parliaments in England, Scotland and Wales were already popular across the country.

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London may by-pass EC on green labelling

By Charles Leadbeater, Industrial Editor

THE government will introduce its own scheme of environmental labelling for products unless the European Commission is able to agree by the end of the year on a scheme to cover the whole of the EC.

The decision to press ahead with a British scheme unless the EC reaches agreement reflects the government's mounting frustration with the time it has taken for EC states to agree on common rules for environmental labelling.

The toughening of the government's stance on the issue was disclosed yesterday by Mr Michael Heseltine, the environment secretary, in a presentation to the National Economic Development Council (NEDC).

The EC initiative on labelling for products has become bogged down in a dispute over how much information the labels should provide.

The UK is pressing for a label to cover the environmental impact of a product from its manufacture, through its use to its disposal.

Some other governments, however, want the amount of information to be limited to manufacture and usage.

The EC proposals, which were presented at the March

meeting of EC environment ministers are due to be discussed at further meetings in June and October.

The Confederation of British Industry, the employers' organisation, told the NEDC discussion on industry and the environment that there were three difficulties with UK government policy.

● A lack of clarity about public policy objectives particularly on transport and land use.

● Often UK pollution control policies are tougher than those in competitor countries.

● The prospect of sharply higher electricity prices would put further pressure on the finances of industries such as steel and chemicals which need to make the most significant polluting industries.

Mr Walter Ellis, the NEDC's director general said the ministers, business leaders and trade unionists attending the council had broadly agreed on the framework of policy on the environment.

He said there was evidence that the participants in the council were increasingly able to establish a consensus on the practical aspects of issues such as environment and education policy.

UK increases aid to Africa and Bangladesh by £30m

By Emma Tucker

THE government yesterday announced a further £30m in Britain's aid budget for humanitarian relief in Africa and Bangladesh.

Mrs Lynda Chalker, the overseas development minister, said the increase demonstrated the government's commitment to "providing substantial humanitarian assistance at a time of unprecedented crises."

Since the news of famine in Africa and the cyclone disaster in Bangladesh broke a few weeks ago the government has been defending its record on overseas aid in the face of severe criticism from the opposition.

Mrs Chalker said the extra

funds brought the total addition to the aid budget for humanitarian assistance this year to £80m.

The bulk of the extra money will go towards famine relief in Africa with £20m reaching its target through non-governmental organisations and international agencies. £5m will go to Bangladesh. Details on the remaining £5m were still being worked out.

The opposition Labour party welcomed the addition but said the amount of money given by the government fell far below the 0.7 per cent of gross national product target set by the United Nations.

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Howe urges government to seize lead on Emu

By Philip Stephens, Political Editor

The government was urged yesterday by Sir Geoffrey Howe to seize the opportunity offered by its European partners to play a central role in shaping economic and monetary union (Emu).

The former deputy prime minister said that the draft treaty on Emu suggested earlier this month by Mr Jacques Delors - allowing Britain to defer a final decision on whether to participate in a single currency - meant that the government had now been offered a choice instead of an ultimatum.

Sir Geoffrey, whose resignation last year over Mrs Margaret Thatcher's approach to Europe provoked her eventual defeat, warned that "a renewed exclusion of Britain from the process of institution-shaping within the Community would be fatal".

In a lecture to the Institute of Fiscal Studies, he urged the government to accept "Mr Delors' concession and 'leave open for the present the vexed question of whether or not we actually participate in full EMU, whenever that occurs'".

His speech came against the backdrop of growing unrest among some right-wing Tory MPs over whether Mr John Major will resist the pressure from Britain's European partners to sign up for a single European currency.

But Sir Geoffrey dismissed Britain's capacity to veto a move by its partners to establish a single currency as illusory.

There was a tendency in Britain to underestimate the political will behind a single currency on the continent, he added.

If the government sought to halt the Emu process at the present intergovernmental conference, other nations would simply set up a new framework outside the existing EC treaties.

Sir Geoffrey concluded: "My suspicion is that when the time approaches [for Emu], the British people and the British Parliament will not wish to be left behind once again on the margins of Europe."

Major launches policies to revitalise education

By Andrew Adonis

THE prime minister yesterday launched a series of important reforms to the education system intended to promote a sharp increase in the number of 16-year-olds proceeding to further and higher education.

Hailing education as "an absolute top priority for the 1990s" Mr John Major, used the launch of the reforms as a platform to regain some of the political initiative and place the issue firmly on the general election manifesto.

An extended system of training credits, a streamlining of vocational qualifications and the removal of post-16 colleges from local authority control are the main features of two white papers (policy documents) issued yesterday. A separate white paper for Scotland proposes reforms to training and higher education systems similar to those planned for England and Wales.

"The country does not have the skilled or motivated workforce that it needs," Mr Major said. He added that a "deterioration to break down the artificial barrier which has for too long divided an academic education from a vocational one" lay at the heart of the reforms.

The opposition Labour party responded by condemning the plans as falling either to reform or to broaden A-levels, described by Mr Major as "the

benchmark of excellence". Mr Tony Blair, Labour's employment spokesman, said the proposals "simply perpetuate the irredeemable choice at 16 between the vocational and the academic, which lies at the heart of our problems".

The two policy documents for England and Wales - one on education and training, the other on higher education - include proposals to:

- Remove sixth-form, tertiary and further education colleges, 576 in all, from local education authority control. From April 1993 colleges will be funded directly by the government, through new councils appointed by and responsible to it.

- Abolish the distinction between universities and polytechnics, and establish a single framework and funding council for higher education. Polytechnics will be able to call themselves universities.

- Offer every 16 and 17-year-old leaving full-time education a training credit. Credits are currently available to 10 per cent of school leavers; from April 1993 they will be extended "progressively", and will apply nationwide by the end of the next parliament.

Each credit represents a voucher entitling a young person to buy a training programme leading to a recog-

nised National Vocational Qualification.

- Introduce a streamlined and enhanced system of vocational qualifications by the end of 1992, to be implemented by the National Council for Vocational Qualifications.

- Introduce an advanced diploma, to be awarded both to students taking A and AS levels and to those gaining vocational qualifications of the same standard. However, A-levels will remain unchanged: the diploma will be equivalent to two A-level passes.

- Alter the school-leaving age to require all 16-year-olds to complete their GCSEs at the end of the summer term.

- Allow schools to admit part-time and adult students to sixth-forms, and to accept training credits or to charge fees for them.

Mr Kenneth Clarke, the education secretary, told the Commons that the government had set the aim of "mass participation in higher education, further education and training while maintaining and enhancing present high standards".

He added that the government expected one in three of all 18-year-olds to be in higher education by the end of the century. Editorial Comment and Analysis, Page 16

Shipyard workers stay on strike

By James Burdon, Scottish Correspondent

MANUAL workers at the Norwegian-owned Kvaerner Govan shipyard in Glasgow yesterday voted almost unanimously to continue their 11-day strike. They insisted that the company withdraw dismissal notices which it issued against the strikers last Friday.

Management at the Scottish yard last week raised the stakes in the dispute by telling the 1,600 strikers that it would only take back those workers who accepted a tougher package of pay and conditions than that which they narrowly rejected before the strike began.

It also said it would end an enhanced redundancy scheme which offered large pay-offs to

workers who left the yard. Kvaerner Govan said it believed the scheme gave an incentive to "destructive elements" to try "to force the company into a situation where large scale redundancies are unavoidable".

Mr Steinar Dragebo, managing director at the yard, which builds gas carrying tankers, said the company would welcome an opportunity to discuss the dispute with the unions. But no talks were planned.

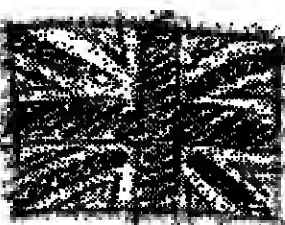
Mr John Carty, district secretary of the confederation of shipbuilding and engineering unions, said the company's action last Friday had united the workforce with the union officials. Previously the offi-

cial had advised the manual workers to accept the terms the company was then offering but 99 per cent of the workers rejected them.

One of the points at issue in an offer which involves pay and working practices over a 21 month period is the company's wish to move from four to five nightshifts a week. It now wants the nightshift to start earlier in the day.

Mr Dragebo has said that despite the £26m investment Kvaerner has made in the former British Shipbuilders yard, the company might have to consider walking away from the yard. "It could be more expensive to go on losing money," he said.

BRITAIN IN BRIEF



Labour calls for scrapping of hard-Ecu

Mr John Smith, the opposition Labour party finance spokesman, urged the government to drop its plan for a parallel European currency as he sought to emphasise his party's commitment to closer European integration.

Mr Smith described the government's plan for a "hard-Ecu" to compete with national currencies as "dead".

Setting out Labour's policy towards European monetary and economic union, Mr Smith said it was reluctant to accept a rigid timetable for the creation of a single currency. It would also insist that a European system of central banks was accountable to governments through the Council of Finance Ministers (ECOFIN).

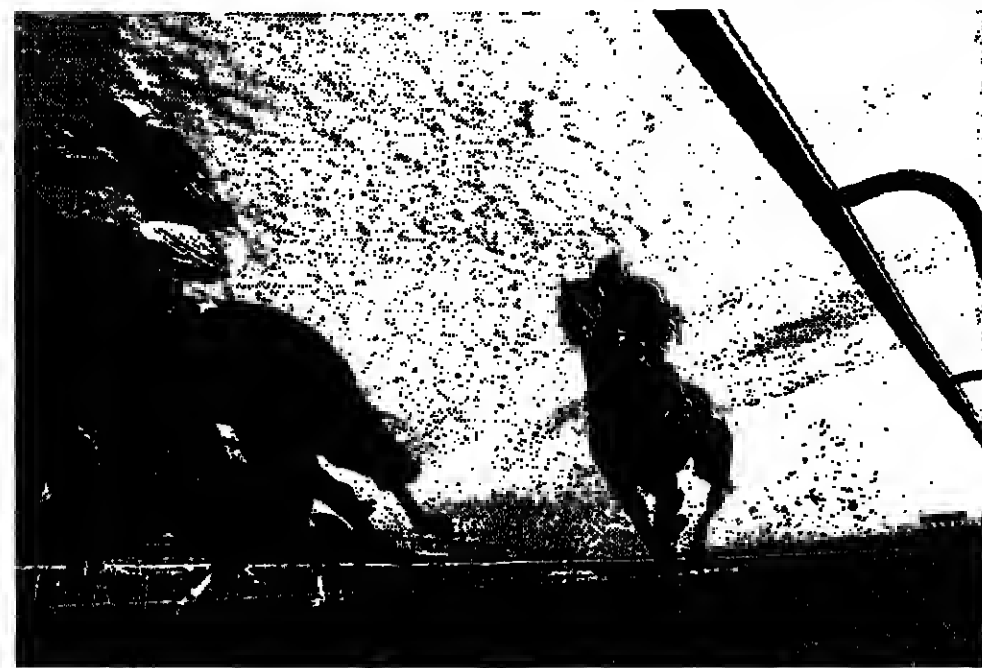
Sales volumes fall sharply

High street sales volumes registered the largest monthly fall last month since July 1979, following the March spending spree to beat the budget increases in Value Added Tax.

The Central Statistical Office announced that provisional retail sales volumes fell by 3.5 per cent between March and April, to take the annual rate 2.4 per cent lower than last year's levels.

While high street spending remains very depressed, the CSO cautioned against extracting an underlying trend on the basis of two months' highly erratic figures. April's fall was widely predicted after the 3.6 per cent rise in March, when shoppers concentrated on buying forward purchases to avoid paying extra after VAT's rise to 17.5 per cent.

Lex, Page 18



Racing presents financial burden to bookmakers

Britain's biggest bookmaking concerns will be forced to pay more money to the horse racing industry if proposals by the House of Commons home affairs committee are adopted. In recent years, bookies' contributions to racing had been "quite inadequate", according to the committee's chairman, Sir John Wheeler. In turn, the racing industry was sharply criticised for poor management and lack of commercial skills. At present, bookmakers contribute about £37m a year to the industry; the committee wants this humped up to £50m a year at 1991 prices, starting in 1992-93.

Ruling on Nissan dispute

The legal battle between Nissan Motor, the Japanese car maker, and Nissan UK, its UK distributor, over sales in Britain must be dealt with by arbitration in Japan, Sir Nicolas Browne-Wilkinson, the vice-chancellor, ruled.

Sir Nicolas granted an application by Nissan Motor for a stay on a High Court action launched by Nissan UK, which had sought a declaration that a notice from the Japanese car maker terminating its rights to exclusive distribution in the UK was null and void.

The judge will give full reasons for his decision later this week when he will rule on an application by Nissan UK for an injunction to prevent the distribution deal being terminated pending the outcome of arbitration.

FFV Aerotec cuts 200 jobs

The announcement of 200 job cuts at Manchester airport coincided with an official

Gambler falls at first hurdle

A man who gambled away on horse racing more than £3m fraudulently obtained from investors was jailed for four years. Mr Nicholas Young, former executive director of Clark Kenneth Leventhal, an international association of accountancy firms, pleaded guilty to 11 charges including forgery and deception.

While claiming to invest money in offshore trusts, he was actually spending it on a system of horse racing he believed he had perfected while attending Cambridge university in the 1960s.

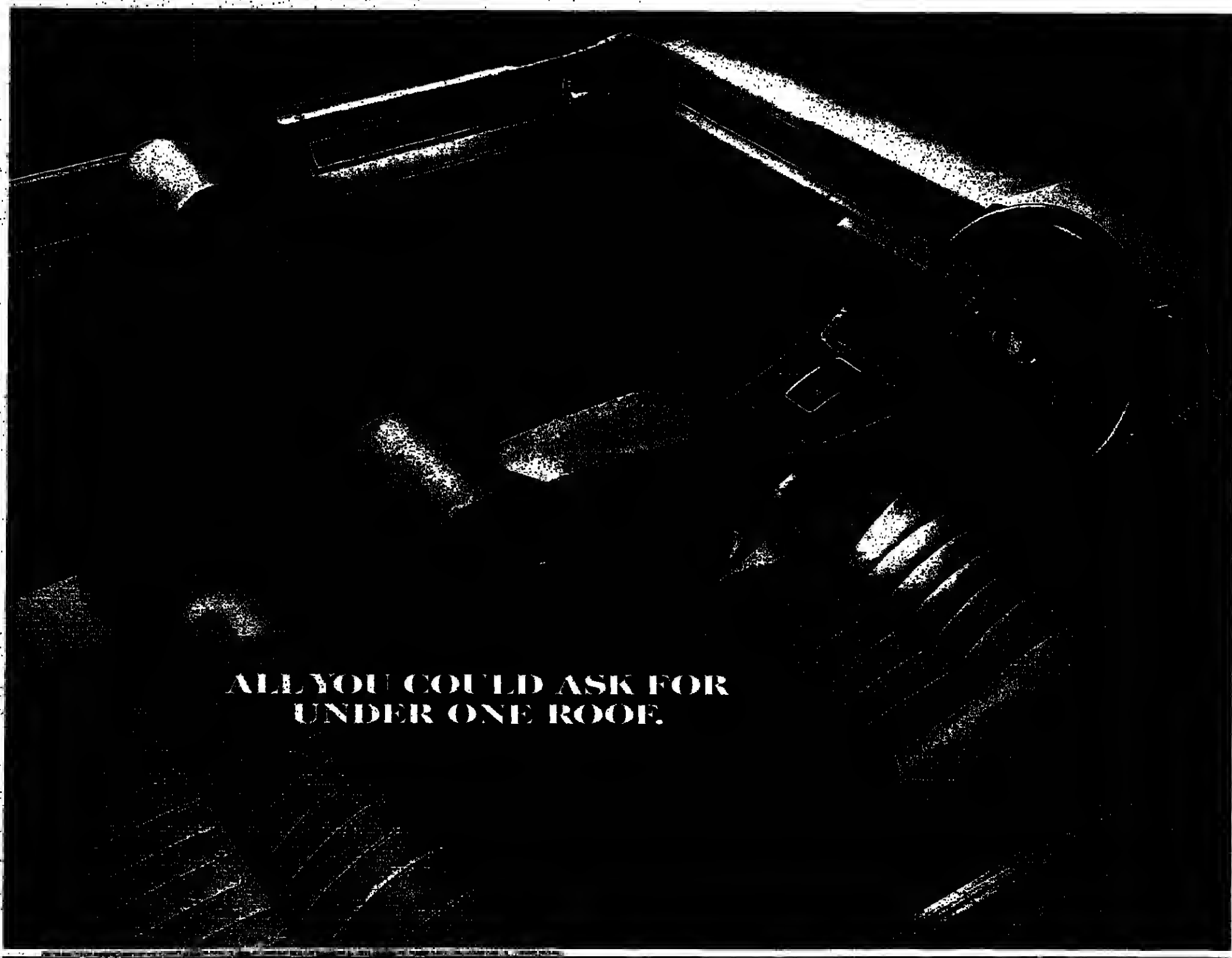
The losses at Wallace Smith Trust, the small London bank whose chairman was recently arrested for alleged fraud, may run into the "tens of millions of pounds", according to one of the provisional liquidators.

Mr Tim Hayward of KPMG Peat Marwick McLintock said it was too early to calculate a more precise figure because assets were still being traced.

Mr Wallace Duncan Smith, the bank's chairman and joint managing director, is on bail of £250,000 after being arrested at the end of April and charged with fraudulent trading. Mr Smith is a Canadian citizen and the bank is owned by a family trust.

London upgrade

An effort to raise the quality of life for Londoners will form the centrepiece of Labour's manifesto for the capital. The opposition party outlined a plan for a new £160m orbital rail line using updated existing track to take passenger and freight train traffic away from the centre of the city. The loop line would have bus and tube interchanges.



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As with everything else, the Jaguar Sovereign's in-car entertainment sets its own standard.

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TECHNOLOGY

Increase in good vibrations

The arcane world of vibration technology is waking up to the "green effect" as users of heavy equipment begin to realise the importance of cleaning up their act.

For IRD Mechanicals the green dividend might be thought of more as a comment on the Cheshire hills close to its UK headquarters than as an influence on its business.

But IRD, which in the 1980s pioneered the technique of determining the condition of machines through vibration analysis, has noticed a growing awareness of the environment among clients over the past two or three years.

Jamie Lumsden, IRD's director of European operations, says the trend is really a by-product of equipment users continuing search for efficiency in increasingly competitive markets.

All rotating machines vibrate, but the way they do so can often indicate that something is about to go wrong. This has underpinned IRD's predictive maintenance technology, which aims to anticipate faults that could lead to expensive shut-downs.

The concept is a sophisticated, objective descendant of the old "threepenny hit" test using a coin placed on its edge to check vibration. Early electronic sensors began an industry which has now gone through several generations of software, and IRD, a US company owned by Dobson Park Industries of the UK, has grown to \$45m of annual sales.

The environmental spin-off for IRD has come in a number of ways. Predictive maintenance in industries such as power generation, pulp and paper manufacturing and petrochemical processing could forestall a machine failure which causes the release of oil and a potential environmental hazard. At the same time, vibration technology is an end in itself because it provides an objective test of excessive noise levels.

The environmental effect allows Lumsden to claim that IRD is "green, successful and northern" - a rare combination, especially in a recession.

Andrew Baxter

Sematech, the US government-supported semiconductor industry consortium, is preparing long-range plans beyond its original five-year charter. The industry group is expected to seek additional federal funding and to set ambitious new technology goals.

As Sematech lays plans for the future, however, industry members and the US government are assessing its accomplishments to date.

Since its formation in 1987 Sematech has been controversial. The industry consortium represents a radical experiment in US industrial collaboration and raises serious questions about the proper role of government in commercial research and development.

Collaboration did not come naturally to US semiconductor manufacturers. The industry's culture is deeply rooted in an entrepreneurial, go-it-alone spirit of Silicon Valley.

It also went against the grain for US chip makers to seek government support. The same industry executives who lobbied for Sematech in 1987 had told a Congressional panel five years earlier that the government should maintain an "arm's-length" relationship with the chip industry.

Yet Sematech, a consortium of 14 leading US chip makers which gets half of its annual \$200m (\$114m) funding from the US Defence Department's Advanced Research Projects Agency, stands as evidence of the radical changes that have been forced upon this industry of individualists.

Faced with mounting competition from Japan, which many saw as a threat of extinction, the top US chip makers banded together to develop advanced chip production processes which they hoped would enable the US semiconductor industry to regain world leadership in chip manufacturing technology.

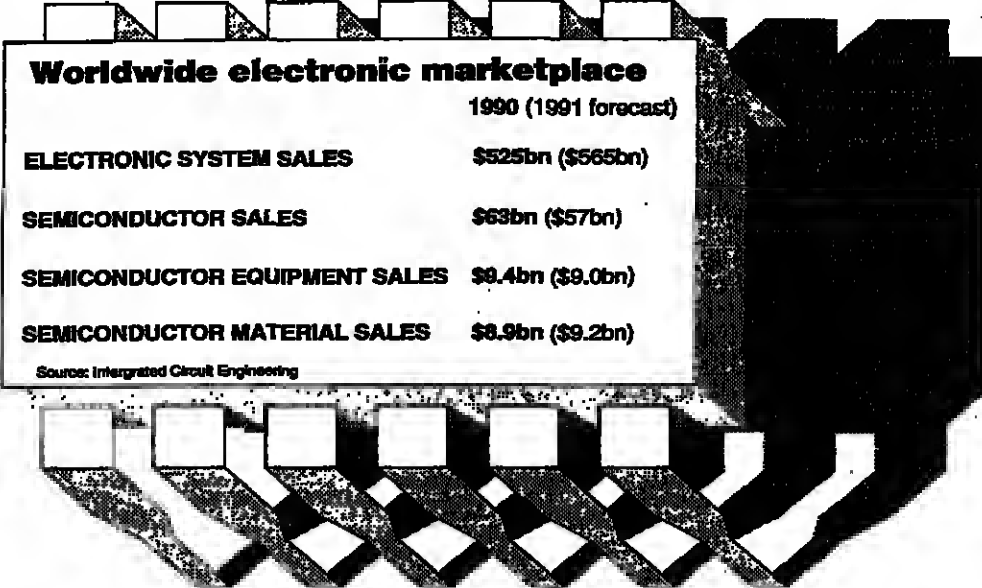
Over the past three years Sematech has modified its mission. While it originally set out to build a world-leading prototype semiconductor production plant, the consortium now aims "to provide the US semiconductor industry with the domestic capability for world leadership in manufacturing".

The switch of emphasis is significant. Since 1989 Sematech has focused much of its attention, and budget, upon supporting US chip production equipment companies that make tools for chip manufacturing through joint technology development projects.

Sematech has built the

Sematech's role in the US semiconductor industry is again under scrutiny, writes Louise Kehoe

Loyal fans but mixed reviews



"world class semiconductor fabrication facility" that it promised, but this serves largely as a laboratory for testing new equipment - and as a showcase for visiting dignitaries. This week Prince Philip will have the opportunity to marvel at the gadgetry that makes the chips that power the computers that make the business world turn around.

Prince Philip's tour guides have plenty of experience. They commonly explain to visiting congressmen and members of President Bush's administration the vital role that semiconductor production tools play in building the foundation of the \$565bn world electronics industry.

Washington visitors also hear about the decline of the US semiconductor equipment industry, which dominated the world market 10 years ago but is now struggling against intense Japanese competition.

While Sematech's research and development programme is "on track and on time" according to a government review conducted last year, "the consortium's main benefits to

Americans are indirect. They include the economic and national security benefits that come from limiting the potential for exports in world memory chip production and in key segments of the semiconductor manufacturing equipment and materials industry and the benefits likely to come from the continued operation of

"Sematech could meet its objectives and still not restore US semiconductor manufacturing leadership"

commercially vigorous US-based manufacturing firms ready and able to exploit emerging technologies", the panel, chaired by John Betti, under secretary of defence for acquisitions, concluded.

Is that enough? Critics among non-member semiconductor companies say that the consortium is little more than a federal subsidy for a select

few chip makers that will do nothing to solve the industry's problems. But they offer few alternative proposals.

Among its members, Sematech's most important contribution is seen in terms of improved relationships between US chip makers and US manufacturers of semiconductor production equipment that enable them to jointly develop more advanced and reliable production tools.

Sematech has created an environment in which chip-makers work closely with equipment manufacturers to test new equipment and willingly share the results of these efforts with other members of the consortium. "It would have been unheard of for Intel engineers to come over and talk about a new piece of equipment but today it is common place," says Charles Sporko, president of National Semiconductor and until recently the chairman of Sematech.

"We believe that it is important for the US to have a viable semiconductor process equipment industry," says Craig Barrett, executive vice presi-

dent of Intel. This is Intel's primary reason for membership of Sematech, he says.

"I am more optimistic about the outlook for the US equipment industry than I was a couple of years ago," said Barrett. "They have made great strides in quality and the communications between the equipment and semiconductor producers have improved." Sematech has played a major role in this effort, he said.

Yet Sematech has not succeeded in stemming the tide of Japanese competition in the semiconductor market, or the market for semiconductor production equipment. In both sectors US companies continue to lose ground.

"Sematech could meet all of objectives and still not restore US semiconductor manufacturing leadership," the federal review panel concluded. Sematech is not enough, industry executives acknowledge.

A new proposal, aimed at establishing US leadership in semiconductor production technology by the year 2000, was mooted last week by the National Advisory Committee on Semiconductors (NACS).

"The semiconductor industry is entering an era where no single company has the financial resources to develop all the manufacturing processes, add equipment and build the factories needed to process chips at the end of the decade," the committee said in an interim report.

Now the NACS faces the difficult problem of shaping a solution. In doing so it may recommend an expansion of Sematech's role. Alternatively, the NACS may seek the formation of another consortium that will more directly address the goals that Sematech originally set out to achieve.

Sematech's most significant contribution to the future of the US semiconductor industry may have been to lay the groundwork for more ambitious collaborative projects in the future.

US chipmakers are now far more willing to co-operate among themselves and even the Bush administration's staunch supporters of hands-off, laissez-faire industrial policy have come to recognise that government support for semiconductor technology development holds potential benefits for the entire US industrial base.

The world tries to catch Fanuc

By Andrew Baxter

Market shares of 50 per cent or more have often proved to be a dangerous prelude to technological innovation and stifling competition - an unhealthy attitude to long-term product development.

These days, however, the few companies that can genuinely claim such worldwide dominance are unlikely to be sitting on their laurels, especially if they are Japanese. Many have reached that position by stepping on to a treadmill where new products increase market share, add to pressure on competitors and finance the search for further innovation.

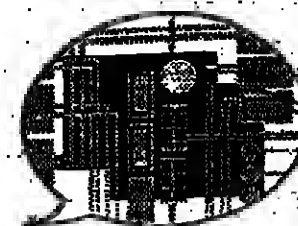
Fanuc, the world's largest producer of computer numerical control (CNC) units for machine tools, is a case in point. The Japanese company has about 70 per cent of its domestic market, and GE Fanuc Automation, its factory automation joint venture with General Electric of the US, has more than 50 per cent of the US market for CNC units (which use numerical commands to control the actions of machine tools such as drilling and cutting).

The past 20 years have seen a constant search at Fanuc for controls that can give machine tools greater speed and accuracy, with Seimemon Inaba, the company's founder and president, continuing to provide inspiration for R&D research and development staff - a third of the workforce.

In the circumstances it is hard for Fanuc to let up on the pace of development. In spite of its dominant position, estimated at more than 50 per cent of the CNC market worldwide, there are still technical challenges to overcome.

This was emphasised last week in a co-ordinated worldwide announcement by GE Fanuc, a four-year old joint venture which operates in most of the world and combines GE's programmable controllers and factory automation software with Fanuc's CNC, motors and drives.

Two new developments - a low-cost computer control and the application of reduced instruction set computing (Risc) processors on its top-of-



TECHNICALLY SPEAKING

the-range control system - will add to the pressure on GE Fanuc's rivals to compete technically.

GE Fanuc hopes the new products will further a key aim of increasing its European market share. Siemens still retains leadership of the European market for CNC units, but is being pressed hard by the US/Japanese venture.

According to a study of the EC machine tool sector last year by W.S. Atkins, the UK management consultants, European companies have worked hard over the past decade to catch up with the Japanese in the electronic capability of machine tools.

But generally, it says, Fanuc and to a lesser extent Mitsubishi have been able to retain their technological advantage due to economies of scale, being further down "the experience curve" and high levels of investment in R&D.

That advantage could now be extended. GE Fanuc is claiming a world first for the application of a 64-bit Risc processor as an option on its Series 15 machines. Faster execution of instructions and greater sophistication will eliminate "servo lag", the difference between the commanded and the actual path of the tool through the work.

The Series 15 is for simpler applications, such as controlling robots that load and unload parts. It completes a family of GE Fanuc controls and has a narrow-profile display unit which, says Avrell, "is far beyond anything that's around at the moment".

Competitors will be able to make their own minds up about that next month in Paris when the Series 15 makes its debut at the 9th EMO machine tool exhibition.

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FT LAW REPORTS

Bank succeeds on war zone claim

THE GOOD LUCK
House of Lords (Lord Bridge of Harwich, Lord Brandon of Oakbrook, Lord Oliver of Aylmer, Lord Goff of Chieveley and Lord Lowry) May 16 1991.

A SHIP's entry into a prohibited war zone in breach of warranty under its insurance contract automatically brings the contract to an end so that the insurance cover ceases. Accordingly, where the insurer was left in possession so long as he did not default. He undertook to insure the vessels, and the insurance was assigned to the bank. In addition the bank took out a mortgagee's insurance.

The House of Lords so held when allowing an appeal by the plaintiff, the Bank of Nova Scotia, from a Court of Appeal judgment reversing Mr Justice Hobhouse's decision that the defendant club, the Hellenic Mutual War Risk Association Ltd, was liable to the bank in damages for breach of warranty.

LORD GOFF said that the club was a shipowners' mutual insurance association. It provided protection to Greek shipowners against war risks. It was based in Bermuda and its managers were Thomas R Miller & Son (Bermuda) Ltd. The insurance provided by the club was governed by its Rules. Rule 20 gave directors power to specify certain places as additional premium areas. If a ship proceeded to such an area the owner continued to be insured, but was bound to pay an additional premium. During the relevant period the most important additional premium area was the Arabian Gulf.

Rule 25 gave the directors power to prohibit members from going to any "port, place, country, zone or area". Rule 26 provided that "every insurance... shall contain a warranty... by the owner that all... prohibitions... shall be acted upon".

Prohibited zones were zones of such extreme danger that it was not considered acceptable that vessels should be covered at all.

In September 1980 the club declared the Shatt Al Arab and Khor Musa a prohibited zone, and the approaches to those places at the Northern end of the Gulf which were directly

affected by hostilities between Iran and Iraq.

Among club members in 1980 was the Good Faith group. In 1980 and 1981 its reputation was very good. At the end of 1981 it had 98 vessels. Money had been advanced to the group by various banks. The largest advances had been made by the plaintiff bank.

The primary security consisted of mortgages on the vessels, under which the borrower was left in possession so long as he did not default. He undertook to insure the vessels, and the insurance was assigned to the bank. In addition the bank took out a mortgagee's insurance.

The borrower having executed a specific assignment of the insurance on the vessel, the bank then gave notice of assignment to the insurer. A loss payable clause was endorsed on the relevant insurance document, and a letter of undertaking was given by the insurer to the bank.

With regard to the Good Luck, the club, by the letter of undertaking, confirmed that the Good Luck was "entered in this association in accordance with the rules for war risk insurance", and undertook to hold the war risks policy to the bank's order.

By paragraph 3 of the letter it undertook "to advise you promptly if the association ceases to insure as aforesaid".

The Good Faith group was in the practice of chartering vessels to Iranian charterers and sending them into the Gulf. Those voyages took the vessels into the additional premium area and, when they went into Bandar Khomeini, into the prohibited area.

Good Faith did this without notifying the club and without informing the bank.

Millers discovered what was going on in the autumn of 1981. Neither the club nor Millers informed the bank.

In April 1982 Good Faith started to renegotiate its loans with the bank. The bank was aware that mortgaged vessels were trading into the Gulf, but was not aware that they were doing so uninsured. It did not check the position with the club or Millers.

On April 7 1982 Good Faith chartered Good Luck to Iranian charterers. On June 6, while proceeding up the Khor Musa to Bandar Khomeini, she was hit by an Iraqi missile and was ultimately declared a total loss.

Good Faith made a fraudulent claim on the club, pretending it had given advance declaration of entry into the additional premium area and that it was ignorant of prohibited areas.

Millers were aware of the probability of fraud and that because the vessel was in a prohibited zone, the club would not be legally liable to meet the claim.

The bank completed renegotiating the refinancing agreement, and in the second half of July it permitted Good Faith to draw down an additional \$2.6m for working capital.

On August 4 the club rejected Good Faith's claim for indemnity in respect of Good Luck, on the grounds that she was in a prohibited area, and was in an additional premium area without prior notification. At no time before August 5 1982 did Millers or the club disclose to the bank what they knew about the defects in the claim made on the club, or any other aspect of Good Faith's conduct.

The bank claimed damages from the club for, *inter alia*, breach of the letter of undertaking, Mr Justice Hobhouse held the club liable in damages. The Court of Appeal reversed his decision. The bank now appeals.

Mr Justice Hobhouse concluded that the strong probability was that if the bank had been told by Millers that at the time of the casualty Good Luck was in a prohibited area and was not covered for war risks, the whole matter of including her in the security would have been handled differently.

He was satisfied that the strong probability was that any value attached to Good Luck would have been put on one side until the situation had been clarified, and that no draw down in respect of working capital would have been permitted.

The judge considered that a wide and hushelike interpretation should be given to paragraph 3 of the letter of undertaking, the purpose of which was to enable the bank fully to protect its rights and security, including evaluation of its security for the past and the future.

He held that entry into a prohibited zone contrary to rule 25 required the club to notify the bank under paragraph 3 of the letter of undertaking. Once a vessel entered into a prohibited zone she was,

in ordinary business terminology and in truth, uninsured, and accordingly the club had ceased to insure her within the meaning of paragraph 3.

The Court of Appeal did not agree that entry into a prohibited zone, though breach of warranty under rule 25c, had the automatic effect of bringing the insurance contract to an end. They said the breach entitled the club to treat the contract as at an end if it chose, and that it did not cease to insure the ship until had decided whether it would treat the breach as bringing the contract to an end.

They supported that reasoning by analysis of section 33 of the Marine Insurance Act 1906. Their analysis was not correct. Section 33(3) provided that a promissory warranty, by which the assured undertook that some particular thing should be done, was "a condition which must be complied with... if it be not so complied with then, subject to any express provision in the policy, the insurer is discharged from liability as from the date of the breach of warranty".

The words were clear. They showed that discharge of the insurer from liability was automatic, and was not dependent on any decision by the insurer to treat the contract or the insurance as at an end.

Mr Justice Hobhouse's approach was consistent with the plain meaning of section 33(3). The insurer, as the Act provided, was discharged from liability as from the date of the breach, so that he thereupon had a good defence to a claim by the assured.

As to his construction of paragraph 3 the judge's reasoning and conclusion were correct. Once a vessel entered into a prohibited area she was, in ordinary business terminology and in truth, uninsured, and so the club had ceased to insure her within the meaning of paragraph 3. Once the Court of Appeal's construction of section 33 of the Act was rejected there was no answer to his approach.

The appeal was allowed. Their Lordships agreed.

For the bank: Jonathan Mance QC, Julian Flaux and Stephen Kenny (Constant & Constant).

For the club: Stuart Boyd QC, Jonathan Gilman QC and David Bailey (Herbert Smith).

Rachel Davies
Barrister

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LEGAL NOTICES

NOTICE OF MEETING OF
CREDITORS
ALPHAS CIRIUS LIMITED

NOTICE IS HEREBY GIVEN pursuant to Section 98 of the Insolvency Act 1986, that a meeting of the Creditors of the above named company will be held at 43 Temple Row, Birmingham on 5 June 1991 at 11.00 am for the purpose of hearing and determining the report prepared by the Administrative Receiver in accordance with the said section and, if thought fit, appointing a Committee.

Creditors whose claims are wholly secured are not entitled to attend or vote at the meeting. Creditors who are partly secured may only vote in respect of the balance of the amount due to them after deducting the value of the security, as estimated by them.

A creditor in respect of a debt due on, or secured by, a bill of exchange or promissory note must send the bill or note to the company as a security held by him unless that other person is subject to a bankruptcy order or in liquidation.

Creditors wishing to vote at the meeting must lodge a written statement of their claims with me at Court Quay, 43 Temple Row, Birmingham, B2 5JT no later than 12 noon on 4 June 1991. Forms of proxy which, if intended to be used, must also be lodged with us by that time.

DATED this 15 day of May 1991
J.F. Powell
Administrative Receiver

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PERSONAL

LEGAL NOTICES

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As the general meeting provided on May 15, 1991 for the participating stock owners of ECU 1,000 issued in April 1984 by SAINT-GOBAIN, could not deliberate, making the quorum, the participating stock owners are again convened by the board of directors in general meeting on May 28, 1991, at 11.00 at the registered office of the Company, "Les Mirrors" 18 Avenue d'Alsace in COURBEVOIE (92400). This meeting will elect on the following agenda:

- BOARD OF DIRECTORS REPORT ON THE COMPANY'S OPERATIONS FOR FINANCIAL YEAR 1990;
- AUDITORS REPORT ON FINANCIAL YEAR 1990 ACCOUNTS AND ELEMENTS FOR FIXING THE PARTICIPATING STOCK YIELD;
- FORMING THE INCOME OF THE SHARE ENTITLED REPRESENTATIVES;
- POWERS FOR FORMALITIES.

To attend the meeting the participating stock owners will have to provide a blocking affidavit issued by the trustee and in order to appoint a deputy to the meeting they will have to add a proxy to this affidavit.

The deposit of the power and the proxy for the meeting of May 15, 1991 are available for the hereby mentioned meeting.

THE BOARD OF DIRECTORS

YANMATHY LIMITED IN RECEIVERSHIP

NOTICE IS HEREBY GIVEN, pursuant to Section 46 of the Insolvency Act 1986, that a meeting of the Creditors of the above named company will be held at 43 Temple Row, Birmingham on 5 June 1991 at 10.30 am for the purpose of hearing and determining the report prepared by the Administrative Receiver in accordance with the said section and, if thought fit, appointing a Committee.

Creditors whose claims are wholly secured are not entitled to attend or vote at the meeting. Creditors who are partly secured may only vote in respect of the balance of the amount due to them after deducting the value of the security, as estimated by them. A creditor in respect of a debt due on, or secured by, a bill of exchange or promissory note must send the bill or note to the company as a security held by him unless that other person is subject to a bankruptcy order or in liquidation.

Creditors wishing to vote at the meeting must lodge a written statement of their claims with me at Court Quay, 43 Temple Row, Birmingham, B2 5JT no later than 12 noon on 4 June 1991. Forms of proxy which, if intended to be used, must also be lodged with us by that time.

DATED this 15 day of May 1991
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PERSONAL

AUTHORS Your book publishing. Details: Escalier Press of London, 13 Knightbridge Green, London, SW1X 7QL

IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
MR JUSTICE MERVYN DAVIES
IN THE MATTER OF STROMS & FISHER
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and
IN THE MATTER OF THE COMPANIES ACT
1985
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NOTICE IS HEREBY GIVEN that the Order of the High Court of Justice, Chancery Division dated the 13th May 1991 confirming the reduction of the authorized ordinary share capital of the Company from £25,000,000 to £20,000,000 and the cancellation of the amount of £5,000,000 standing to the credit of the share premium account of the Company and the minute approved by the Court showing with respect to the share capital of the Company as altered the several particulars required by the above act were registered by the Registrar of Companies on the 16th May 1991.

Dated the 17 day of May 1991.
Slaughter and May, (RM)
35 Abchurch Lane
London EC4N 3DF

Solicitors for the said Company.

COMPANY NOTICES

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Holders of Share Warrants to Surrender are informed that they will receive payment of the dividend for 1990 of 32.5p per share on and after 21st May, 1991 upon presentation of the Share Warrant, together with a statement of their name and address, at the office of the Bank, Bankside House, 107-112, London EC3A 4AE. Share Warrants must be left at the Bank for three clear days.

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MANAGEMENT: The Growing Business

In search of successful succession

By Charles Batchelor

A SIZEABLE family-owned dressmaking business flourished under its dynamic founder but was forced into liquidation when he failed to look for a successor in time. Because his own children were too young to take on the business, the founder brought in his nephew, a barrister.

The founder died shortly afterwards and the nephew soon found himself out of his depth. He resisted family pressure to sell because he would not have benefited and several years later took the company into involuntary liquidation.

This example of one of the key problems facing the family-owned business is cited by Peter Leach, a partner of accountants Stoy Hayward, in a new study* of the subject. Clinging to family control is not always to the advantage of the business which may in the long-term benefit from bringing in professional managers.

As Leach's book makes clear, understanding the problems of the family business requires psychological insights as much as commercial expertise. The business may bring the family closer together but it can also serve as a catalyst for its destruction.

For example, a father may consciously want to ease his son's entry into the business while subconsciously proving unable to relinquish control of his greatest source of personal fulfilment. The son, for his part, needs to establish his independence but is made to feel that his own future prospects and the debt he owes to his father require him to go along with his father's wishes.

A first step towards managing this problem is for the family to realise that this is not a conflict which is unique to them but that these basic rivalries affect most of the human race. The interests of both generations may be catered for by establishing a division or a new subsidiary over which the son has autonomy.

Serious conflicts may require a neutral third party to be called in. He should listen to both sides, preside over a discussion between father and son and then help draw up a plan to resolve the dispute.

*The Family Business. Published by Kogan Page. 186 pages. £12.95.

It is in the offices of a handful of small companies in Wales and you will be struck by the number of plaques and trophies on display. Closer inspection of the contents of the gilt frames reveals a common feature. All have been awarded for good performance by one of the growing number of Japanese companies to set up in the UK.

Hugh Smith, director of the packaging and mouldings activities of Olford Group, based at Abercarn, near Newport, boasts a particularly impressive collection from companies such as Sony, Sharp and NEC.

Looking to diversify out of its original business of manufacturing expanded polystyrene packaging, Olford has in the space of just three years created a £10m turnover division supplying moulded plastic television cabinets to Sony and Hitachi.

The commemorative plaques and the contracts which underpin them are signs of the growing role which Japanese manufacturers are playing in the UK and the South Wales economy. They also demonstrate that small and medium-sized businesses can meet the tough conditions which the Japanese expect of their suppliers.

Japanese customers account for no less than 70 per cent of the £17m turnover of Olford's South Wales manufacturing operations. Olford, a privately owned company, employs 250 people in manufacturing.

"In 1990 the packaging business was on the brink of disaster," recalls Smith. "We needed business and the Japanese were there. Something told me they had a long-term future."

After a slow start, business picked up sharply following a visit from one of the Japanese company's engineers, Smith explains. The engineer was apparently impressed by the investment that Olford had made in new machinery. "They saw that as a sign of vision," he says. "They look at the attitudes of management."

The Japanese may start from this impressionistic approach to suppliers but they then go on to a detailed review of the business and a painstaking assessment of product and production quality. Melrion Thomas, an executive director of the Welsh Development Agency, estimates that, unfortunately, just 10 per cent of the 6,000 small and medium-sized companies in Wales are capable of meeting the quality standards demanded by Japanese or other large multinationals.

Supplying the Japanese

Painstaking assessment of production quality

Charles Batchelor on a close but informal relationship



Ken Vaughan: 'They tell you which way they are going. It gives you confidence'

Alongside its long-running campaign to attract overseas companies to Wales, the agency is now devoting effort to helping local companies improve standards so that they can become suppliers to the incomers.

"Second and third-tier Japanese companies are now looking to locate here," says Thomas. "Some of them are already suppliers to the large companies or are part of the same group. If Welsh companies don't get their act together quickly the Japanese will bring in their own suppliers."

Individual Japanese companies differ in their approach depending on their own corporate culture and the length of time they have been based in the UK but there are sufficient similarities to draw lessons for smaller UK companies attempting to become suppliers.

Close attention to detail often goes hand in hand with a startling degree of informality. UK companies frequently find that they have committed themselves to substantial investments on the basis of verbal promises of business to come their way.

Olford invested £1.5m in plastic moulding equipment with no written guarantee of

orders from Sony. Once a supplier has established a reputation with a Japanese customer, though, the Japanese are prepared to reveal their budgets and plans to allow the supplier to plan his production schedules. Ken Vaughan (pictured), managing director of A McLeay & Co, a Cardiff-based printer of instruction manuals for Sony, gets advance warning of Sony's production plans.

"When you build up trust they will give you information on, for example, how many components they will be manufacturing over the next year," says Vaughan. "They tell you which way they are going. It gives you confidence."

But before a supplier can achieve this degree of closeness with his customer he must satisfy him that he can meet exacting quality standards. McLeay, which employs 30 people and makes sales of \$4m, is required to achieve a target of fewer than 50 "faulty" manuals per million.

One recent monthly quality report which came back showed he had reached 114 faults. "We got our knuckles rapped," says Vaughan.

The faulty manual will be returned so that McLeay can remedy the problem. "They

don't just demand quality; they give us the tools to do something about it," says Vaughan. The regular reports from Sony give McLeay an overall rating out of 13 and provide a league table to show how the company compares with other suppliers (though the names of the other companies are blanked out).

The Japanese work to their own quality programme, frequently described as "zero defects" and show no interest in BS5750, the main UK quality standard. "We have BS5750 but the Japanese don't recognise it," says Les Porter, sales manager of Harlow Pressings, a Cwmbran-based company with 35 employees and £1.5m of sales.

But quality involves not just meeting demanding standards for the components supplied, it also requires the supplier to meet precise just-in-time delivery schedules. Olford, for example, makes four daily deliveries to Sony.

As Japanese manufacturers have increased the production volumes of their UK factories the timing of deliveries has become even more important and places even tougher demands on their suppliers. Radun Controls, a Cardiff-based supplier of TV remote

control units with £1.3m of sales, currently works to a three-to-five day delivery cycle but expects to move to a 24-hour cycle eventually.

One result of these close links between supplier and customer is that it becomes difficult, particularly for a small company, to work for more than one or two customers. "They are so demanding; there would inevitably be a conflict of interest in a company of our size," says McLeay's Ken Vaughan. "There would be an extra order and you would have to let someone down."

And while there are advantages for the small company in working so closely with a large customer — Radun has received help with training and in sorting out production problems while Olford was assisted by Sony to develop its plastic moulding technology — there are also potential disadvantages.

"You sometimes feel they make so many demands that it is getting too much," says one UK manager. "We are in danger of being swallowed up. They sometimes forget that you are not part of their company."

"Too much dependence is dangerous," warn Peter Goodall and Max Munday of Cardiff Business School. Despite the generally good record of Japanese companies in treating their UK suppliers, the academics point out that it is not unknown for large companies to exploit their dominance of small suppliers. A particular worry for the Welsh is that the Japanese might decide to move their operations closer to the heart of the European market.

Another development which is starting to concern some people is the request by some Japanese companies for detailed accounting information to enable them to isolate and, where possible, reduce manufacturing costs. "We have been asked for this information," says Harlow Pressings' Les Porter. "Some companies give all the information and suffer. We provide a limited breakdown at our discretion."

In the main, though, the small suppliers welcome being treated as partners by the Japanese. The sense of meane that some small companies feel may reflect their past experience of adversarial supplier-customer relationships rather than the present reality. For the moment at least there are many suppliers who are only too happy with the commemorative plaques which adorn their desks.

*See this page, May 17.

In brief...

■ Stung by criticisms that they do not understand their small business customers, the banks have been beefing up the training they provide their managers.

The latest bank to improve training is National Westminster which has linked up with Durham University Business School (DUBS).

DUBS will provide five-day residential courses to nearly 200 NatWest managers this year with emphasis on managers from branches with a high concentration of small firms.

The course will concentrate on the non-financial aspects of a small business including the character of the entrepreneur and the business's overall aims and objectives.

■ More young people are wanting to run their own business, to judge by the level of applications to take part in LiveWire, a privately-sponsored programme which provides advice to 16-25 year olds who are considering self-employment.

LiveWire sent out business planning packs to more than 5,000 people in 1990, an increase of 45 per cent on the year before, while the start-up awards scheme considered 750 business plans from more than 900 people who were considering going into business or whose business had been going for less than one year.

More than 300 entrants shared in £150,000 worth of prizes at a local, regional or national level.

■ Ominously, the number of applicants who were unemployed increased for the first time in four years. The proportion of manufacturing business-based ideas fell from 18 to 15 per cent while retail business proposals rose from 20 to 23 per cent. Service sector businesses accounted for 63 per cent of ideas.

Contact LiveWire, 60 Grainger Street, Newcastle upon Tyne, NE1 5JG. Tel 091-361 5594.

■ Companies which need frequent reports on the financial health of other businesses usually sign a subscription agreement with one of the many business information and credit reference organisations. But for the company which only needs the occasional report Dun & Bradstreet

International has launched a one-off service called Reportline.

Reports on individual UK companies cost £47. Most continental European reports are priced at £70 while North American reports cost \$90.

Contact Roy Alabaster, Dun & Bradstreet, Holmers Farm Way, High Wycombe, Bucks HP12 4ULL. Tel 0494 42000.

■ A compendium of government successes in reducing red tape would, in the view of many businessmen and women, be only a slim volume. The seemingly inexorable growth in the amount of regulation governing business appears to mock official attempts to reduce red tape.

Undaunted, the Department of Trade and Industry, has produced a 28-page booklet listing some of its recent successes in cutting back bureaucracy.

They range from the simplification of VAT procedures for imports to the introduction of competition — and the reduction of costs — to the vetting of National Health Service suppliers.

More important than past successes is a list of combat numbers of the deregulation sections in 16 government departments, including the Inland Revenue and Customs and Excise.

If your business plans are being held back by government requirements then take up the matter with the department concerned, the DTI urges.

Cutting Red Tape For Business. Available from DTI Deregulation Unit, 1-19 Victoria Street, London SW1H 0BT. Tel 071-215 4578/4567. Free.

■ Jim Wallace, MP for Orkney and Shetland and Liberal Democratic spokesman on small businesses, has been named politician of the year in a small business awards scheme, the Guildhall Helping Hands Awards, for his campaigning activities.

Winner of the special award for services to small business was Christine Webber of CD Consultants. Webber launched and runs the women's enterprise centre of West Glamorgan Enterprise Trust. The awards are made by the National Federation of Self Employed and Small Businesses and Tolitt & Harvey, a stationery manufacturer.

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Tel No: 0896 3438, Fax 0896 2600.

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Write Box H8638, Financial Times, One Southwark Bridge, London SE1 9HL

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seeks a marketing or manufacturing company with relevant products or customer database.
Replies to: The Managing Director, Impact Stations Ltd, 7/9 Heathmans Road, London SW6 4TP

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For further information please contact Jamie Smith, Sandy Brown or Paul Wills at the address below:

Friary Court, 65 Crutched Friars, London EC3N 2NP.
Tel: 071 936 3000. Fax: 071 480 6881.

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The Joint Liquidators, J.K.R. Jones and A.M. Menzies invite tenders for the assets of the machining centres division, formerly known as Wadkin Machining Centres.

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- 16 machining centres in work in progress.
 - Spares stock.
 - Machine drawings and relevant interface logic software.

Tender documents (including conditions of the tender offer) can be obtained from Andrew Menzies or Ken Jones

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Centre City Tower, 7 Hill Street, Birmingham B5 4JU
Telephone: 021-643 1936. Fax: 021-643 4993
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BUSINESSES FOR SALE

Kinderflex Limited

The Joint Administrative Receivers offer for sale, as a going concern, the business and assets of Kinderflex Limited.

The company was established in 1964 and manufactures its own range of high quality office furniture systems.

The company is based in Milton Keynes, Buckinghamshire and Rhyll, North Wales.

Salient features include:

- Annual turnover in excess of £2 million.
- Modern leasehold premises in Milton Keynes with a further manufacturing facility in Rhyll.
- Plant and machinery.
- Stock and work in progress.
- Designs and trade marks.
- Substantial order book and prestigious customer base.

For further information contact the Joint Administrative Receiver, Tony Thompson, KPMG Peat Marwick McLintock, Norfolk House, 499 Silbury Boulevard, Central Milton Keynes MK9 2HA. Tel: 0908 661881 Fax: 0908 664363.

KPMG Peat Marwick Corporate Recovery

B. Chambers and Co. Limited
(In Administrative Receivership)

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For further information contact the Joint Administrative Receiver, Ian Chisholm, KPMG Peat Marwick McLintock, St Nicholas House, 31 Park Row, Nottingham, NG1 6FQ. Tel: 0602 483444 Fax: 0602 483401.

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ARTS

Respectable
WeddingSCHAUSPIELHAUS,
BONN

Brecht liked to have it both ways and never tired of weddings, traditional rituals just asking for parody while every gram of romance is being squeezed out for theatrical stardom.

There are mock-weddings in *Drums in the Night*, *The Good Woman of Setzuan* and most famously *The Threepenny Opera*, set in 18th-century London with wedding gifts looted from Setzuides.

The one-act *Respectable Wedding*, written in 1919, predates all these. A young couple celebrate their wedding in a flat whose furniture has been looted from the 18th century. In a series of comic couple, the place gradually falls apart: chairs lose arms and legs, door handles fly off, tables collapse, couples refuse to open and get kicked in the loo floods. In parallel, the superficial harmony between the guests is revealed as a mask for self-interest, lechery and hatred.

Anselm Weber pulls slapstick and psychology together with effortless sleight of hand. The most subtle guest gets a splinter up his nose which gives the bride a chance to touch him up and eventually remove his trousers. Another guest tries to mend the table but instead explores the stockings legs trapped beneath it. There are arabesques of embarrassment when the parents discover the bride is pregnant and a couple who have just met slip outside for a spot of noisy sex, the remaining guests scrambling to hide over the cream pudding to drown the din.

Fine characterisation dramatises the shoddiness of apparent respectability. Wolfram Koch is the upright host man croaking sweet-nothings in the of his bride. He is a woman as the mother-in-law but turns into a tribal matriarch when the going gets tough; Ingrid Schaller's wedding guest is all outraged propriety until her husband tears over the bride's dress; the jealous hag behind the politeness.

This is radical idealism rerun as social comedy. Brecht played as Ayekboun though, as Ayekboun has said of his own work, "Brecht's politics in every line. But there's optimism here as well as a cry for a less hypocritical social order; Brecht's emotional holocausts are always lovingly flawed rather than brutally honest; and this ill-matched pair (Alberta Schatz and Michael Luch) patch things up in the ruins, drunk on the drugs from left-over glasses as they put to sleep together in a bed still to be built.

Love on a shoestring; romance hanging on by its fingernails in a material world; tentative anarchy; Brecht wrote the place before he had seen Marx and gave it its scurrilous title (in German "Die Kleinbürgerhochzeit") afterwards. It is a rarely performed work; Weber's production is relaxed, crisp in comic detail, varied in musical diversion ("Here comes the bride" to a smoky Latin guitarist), upbeat while never letting slip the brittle nostalgia of the best early Brecht.

Jackie Wulschlaeger

Exotic
but
unlovedPatricia Morison
lauds ethnic art

Ethnography has something of an image problem these days. Exotic but unloved, it has to be brought in from the cold with a few blockbuster exhibitions so that at long last the public will begin to appreciate Britain's enormous and superb collections of non-western art. Who thinks of Ektinos in connection with Nureaton? Who associates Maudslayi with a fabulous Pacific and North-Western American collection? A good deal of nonsense is talked about the so-called treasures languishing in museum basements, but in the case of ethnographic collections, often by their nature extremely fragile, the grumble is never the mark. Prices, or at least irreplaceable, collections shipped back by hundreds of colonial administrators crumble away, uncatalogued and unseen.

Part of the problem is the word ethnography, with its since the 1890s. Many people have not a clue what it means and those that do often associate it with Victorian racist scholarship and the ethnically dubious methods of professional plunderers. So it is not surprising that museum people will often say that non-European art is not "popular". And yet, need that be true? This is, after all, the year of *Dances with Wolves*. Surely a blockbuster exhibition on native American art staged now could prove a howling success.

A fascinating afternoon in Brighton showed me what we are missing. Few people, not even specialists, know the Brighton Museum, opposite the Royal Pavilion (tel 0273 603005), owns one of Britain's richest collections of non-western art with some 12,000 items. The Brighton collection now has a new curator of ethnography, Anthony Shelton, who was astonished to discover quite what riches the collection holds. Unfortunately, the museum is typical in that at present the public sees only the tip of the ethnographic iceberg.

Nor, as Shelton admits, is that tip an alluring prospect. The permanent exhibition looks like a redundant aquarium. Nothing appears to have changed since the 1960s. The gallery is painted dark brown, and the African section has a fake leopard-skin background. And yet, within such Stygian surroundings the visitor prepared to crouch and peer will spot some good things, like the Sulu "curing screen" with its horrible personifications of Disease.

Christa Ludwig

WIMBORNE HALL

According to the reference books Christa Ludwig was born in 1928, but we don't have to believe that if we don't want to. Her performance on Sunday, an exemplary demonstration of Liszt singing, in which her vocal powers seemed scarcely diminished by the years. Though the tone hardens a little now when pressed to climaxes, it is still utterly unmistakable; inflections are touched with as much precision as ever and the sense of line, the perfect continuity, remains immaculate. Admirers may have anticipated the recital with apprehension, fearing to find only a pale replica of a great singer; they can only have gone home exhilarated by the persistence of her art.

On her last appearance at the Wigmore Hall Miss Ludwig sang Schubert's "Winterreise". This time, accompanied by Charles Spencer, she offered a very mixed programme, beginning with a Schubert song which included "Der Lindenbaum" from the Müller cycle, and going on to Wolf, Liszt, von Bülow and Strauss. As she relaxed and got into the recital, her singing audibly rolled back the years. There was swift, uncomplicated characterisation in Schubert's "Der Tod und das Mädchen" but "Der Musensohn" was a little laboured, as if the voice was still un-



Conservator Ray Martin at the Brighton museum with the masks from New Ireland, New Guinea

Nor could anyone miss the magnificent winged shark from New Ireland, an island in the Bismarck Archipelago which is now part of New Guinea. The delicately striped monster commemorates an actual event when a brave fisherman had his leg chewed off by a shark but managed to kill the brute and, thanks to a ritual song-and-dance, survived his wounds. The sculptor has represented the heroic fisherman as a tiny figure attached to the mouth of the terrible air-borne fish.

New Ireland masks, or malanggan, were made to repose in ancestor shrines and are extremely rare and fragile. As Shelton explained, curators regard themselves as lucky to own even one; he was thrilled to find that, unknown to the scholarly world, the Brighton collection has 15. The shark apart, they have not been on display in years. However, at least they have now reached the conservation department - thanks to the special needs of the Royal Pavilion, Brighton Museum has a staff of ten conservators. Their skills are thoroughly taxed by these complex masks which mix pith, grass, bone, shell, crushed lime and leaves. Surely never has the human head been more inventively transformed by artists. Vast pedicled stand in for ears and a pair of disciplined wooden serpents marches skyward above a Mohican-like crest; and real teeth snarl in a vulpine grin.

Simply as objects, these sculptures are a masterpiece. They should be seen. Shelton now has to harpoon his own particular fish, development grants, so that more can be made of Brighton's astonishing collection. He hopes to turn Brighton into an ethnographic centre for the south coast. "We should see ourselves as a regional museum, not as one more provincial collection. Then we must develop links with the small

museums which do not have the resources to show their collections." He is that rare thing, a curator who talks enthusiastically about wholesale rationalising and devolution of collections.

So perhaps Brighton will spearhead change in the dusty image of ethnography. Exotic, the current temporary exhibition (until the end of May) but may be extended) which is part of the Brighton Festival, is a very modest show; you could probably fit all the exhibits into two suitcases, and yet it is a model of what you can do. The theme is a quotation from French sociologist Pierre Bourdieu, "The eye is a product of history". We see images of how the White Man perceived the Red Man and, more unusually, the view from the other side.

In 1893, professional photographers Frank A. Rhinherst and Adolph F. Muter were commissioned by the organisers of the Omaha Indian Congress to take a set of studio-portraits of "typical" Red Indians "to preserve the memory of the American Indian for future generations." The Omaha Congress itself soon lost its veneer of ethnographic seriousness as it degenerated into staged battles between Indians and their conquerors. In the exhibition several dozen of these sepia photographs are displayed, poignant images of Indian couples and families which are presented without comment but simply as the melancholy records of a doomed society.

However, it is the second face of *Exotics* which is so interesting, the carvings of argillite made by the Haida Indians of the north-west coast. Argillite is a smooth black material resembling slate. Most of the pieces come from a private collection but some are from the museums at Brighton and Maidstone. The pieces were made between the 1840s

and 1880s and traded with the Europeans, although it is not made clear whether the carvings are therefore a 19th-century version of "airport art" made purely for foreign consumption. Vigorous and delightful as carvings, the pieces are also highly enigmatic in the way they represent Europeans at work and play.

A number take the form of pipes, modelled on the clay pipes which were handed out to Hudson Bay employees, but there are also small figure sculptures and a splendid dish carved with a grinning beaver-man. On one pipe there is a lively scene of a European having his hair cut, on another a man being treated for gonorrhea. The Haida may have found both activities very odd, and they appear also to have been impressed by the white men's ships and by the activities of sailors and shipwrights. A statue of a Russian sea-captain is beautifully observed, grasping the rail of his ship in his high cap and large-buttoned overcoat.

Did European women strike the Haida as remarkably dominating compared to their own? In a lively scene of Europeans courting a large lady in a bustle sits on the knee of a comically undersized sailor. The statuette which appears to show a mother and child may be a caricature of the white woman handling a mannikin spouse. Older still is a woman in Welsh dress with her steeple hat, who has Indian features. Is it the portrait of a servant or was that the Haida lady who dressed as a Welshwoman?

This is a tiny exhibition but it works exceptionally well, partly because it takes an unfamiliar and intrinsically beautiful art-form, partly because it makes us reflect on an exceptionally rich theme, the relationship between European and exotic cultures.

Ohana's Cello Concerto

RECONTRIES MUSICALES D'EVIAN

Evian is best known for its water, its casino and an annual string quartet competition. But the competition (no prizes here) is just one part of the "Recontres Musicales" - a meeting-point between gifted young musicians and some of the world's great musical personalities. Thanks to Mstislav Rostropovich, the inspirator of the whole enterprise, these young musicians can also take part in the performance of works he has commissioned. Last year saw the premiere of Schnittke's Second Cello Concerto. This year it was the turn of Maurice Ohana.

Now in his late seventies, Ohana is finally being recognised as an original voice in postwar music. The reception given to his opera *La Chénine* three years ago in Paris suggests he is even acquiring cult status. This 18-minute cello concerto is neither strikingly exploratory nor populist, but it is still a fascinating, fastidiously-constructed piece of music. Subtitled "In Dark and Blue", it takes the form of a rhapsodic nocturne, full of sultry warmth and seductive sonorities, with jazz effects that could have drifted in from some sleazy Mediterranean nightclub.

In his instruments - colouring - muted trumpets, delicate woodwind voices - Ohana's kinship with Falla

and Debussy is openly acknowledged. As in *Anneau du Tomarri* (1976), Ohana's first essay in this genre, there are passages (like the opening cadenza after a moody orchestral entrée) where the solo part sounds more like a plucked guitar or bass. He also indulges in teasing glissandi and makes the cello sing, dream, pirouette and pout, with gently contrasted backing not unlike a sophisticated jazz section. There are no large gestures or bravura effects; the mood is laid-back, almost private.

Rostropovich brought all his tonal splendour to bear, though the piece must be one of the least taxing of his recent commissions. This year's resident orchestra was Jacques - the Symphony Orchestra of the Toho Gakuen Music School, which consists almost entirely of immaculately turned-out teenage girls. Under Seiji Ozawa, they were an impressive machine, accurate if rather impersonal. In the two overtures, framing the programme - Mozart's *Impresario* and Bernstein's *Candide*, Ozawa also conducted a sumptuous account of the Tchaikovsky Serenade for Strings, after which the expensive Evian audience found the Ohana concerto something of an anti-climax.

Andrew Clark

Antony and
Cleopatra

BLOOMSBURY THEATRE

Nothing about the first all-black British production of *Antony and Cleopatra* is perfect, and yet this is a more satisfying account of the play than the other two I've seen this year. The programme note, by the staging's director Yvonne Brewster, made me fear the worst; it goes from colonisation, via the collapse of old dynasties, to Cleopatra falling "prey to this most unroman of Romans, to his generosity of spirit and his ability to laugh". But the actors are awake to the play's tremendous range, and the production is fully aware that these characters change the course of history.

The actors in this "all-black" cast have, in fact, a vast range of birthplaces, accents, colours and acting styles. Though they are meticulous over details of accent ("Asia" is given three syllables, "expression" four), the actors are awake to the play's tremendous range, and the production is fully aware that these characters change the course of history.

Almost none of them can hold the house with a pianissimo; they rely too much on volume, not enough on a current of focused tone.

But they're caught up in the business of communication. Shakespeare's verse doesn't make them inhibited or monotonous. It supplies them with a vast palette of colour and opportunity. Best, and most natural, is Ben Thomas as Caesar. He has authority, ease and terrific drive. No-one makes more music from the lines than he; he seems to cover two

octaves in a single line. Worst, and most self-conscious, is Remi Setta as a rather creepily urbane Enobarbus. He rarely enters words cleanly, but drowns lines as if playing the bagpipes. Dons Croll is a funny, sensual, powerful Cleopatra, with a large, handsome, cunning and ambitious face. Her diction is slightly affected, she throws up her chin to look powerful, and, feigning ill-health, she could fool no one. She makes nothing of some lines ("Can Fulvia die?" and "or I'll unpeop Egypt") and, once on the monument, an occasional attack of tragic nobility overwhelms her and renders her variety all too finite. But she speaks in liquid phrases, she holds out lines to the light with relish ("his delights were dolphin-like") and her temper ("He words me, girls," is splendid). She catches the untrammelled force that makes Cleopatra the most imperious and the most animal person in the play.

Jeffery Kissoon, who plays Antony, is one of the barkers in the cast. He has a proud face, heroic build and a strong voice. At first he is an odd mixture of "lascivious wassail" and polite oiliness, and his speeches are spoilt by his separate-syllable rapping. But he rises with the play and confers on Antony an extraordinary loneliness, an isolation of temperament that only Cleopatra can cure. The massive power he unleashes in the battle scenes is thrilling.

Alastair Macaulay

The Shaming of
Bright Millar

MANCHESTER CONTACT THEATRE

James Stock's new play, *The Shaming of Bright Millar*, is a strenuous and perplexing experience. One might prepare for this by reading Freud's case notes or Foucault's social history. If one has no familiarity with psychoanalysis or with the history of madness, the action will be unintelligible but absorbing. If one has, the play will look like a course of therapy for its central characters. Either way, Stock tries to dramatise an intractable process: memory, madness, guilt and suicide.

The play's 12 scenes shift between 19th-century Manchester, Nazi Germany, and contemporary Cornwall. It is the story of a woman, an impeccable old German woman: her daughter burned herself to death; her granddaughter suffers the expected nightmares over her mother's loss. Elsie's body is consumed by psychosomatic cancer and her mind by guilt for her part in a Nazi eugenics propaganda film. Add in substantial flashback and dream roles for Hitler, and a poor 19th-century lunatic called Bright Millar, and a tottering plot is held by its own complexities.

The play comes straight from the Dennis Potter school, and resembles *The Singing Detective* in its attitude to disorientation. It is rather like a film that would fare much better on television, where its intercutting suits the medium. While Brigid Larmour's direction manages the transitions well enough, and a sensible open set keeps the action clean, the play's plotlessness wins in the end.

The language is brutal, steaming hot from the troop-

er's kit bag, and often violent: the world around us is "a vast museum of pain", Mahler's songs "like scabs you can't help picking at". The violence of the central episode (or "primal scene", for the psychoanalysts) is accompanied by Bright Millar in the name of religious investigation, is sadistic and sickening. The actors cope admirably, with Joan Heal as Elsie and Robin Soans as Hitler particularly good. The play is an intractable, the most of the difficult lunatic part, producing the screams and incoherences to order.

The play needs shortening, and the acting style fails to grasp that histrionics are no virtues. The language is expressed so that they speak of us as well as of the situation on stage. I hope this play improves; it deserves to. Now, it has three main drawbacks. Its material is too dense; characters have to seem emotional heights as soon as they start each scene. Its shifts are too abrupt and arbitrary, depriving the play of pace and momentum. And its answers fail to live up to the elaborateness of its queries.

Its conclusion is grim: the past never dies, and the children pay for their parents' blunders as they enowball through the generations. This sentiment is expressed by Philip Larkin's vicious lines: "Man hands on misery to man; It deepens like a coastal shelf; Get out as early as you can, And don't have any kids your self"; but *The Shaming of Bright Millar* is even more desolate.

Andrew St George

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TODAY'S EVENTS

BARCELONA

Gran Teatre del Liceu 21.00 Recital by Kiri to Kanawa accompanied by Roger Vignoles, with songs by Mozart, Liszt, Strauss and others. Tomorrow and Sun: Tosca (412 1466)

BERLIN

Staatoper unter den Linden 19.30 John Cenko's ballet *The Taming of the Shrew*, also tomorrow. Thurs: La traviata. Fri: Pelléas et Mélisande (2004 782). Komische Oper 19.30 Gunter Kramer's production of *Der Freischütz*. Tomorrow: *The Barbered Bride*. Thurs: *Giustino* (2292 655). Deutsche Oper 19.30 Otto Nicolai's *Die lustigen Weiber von Windsor*. Tomorrow: *Aida*. Thurs: Marion Leuschke. Fri: concert to celebrate 20th anniversary of Berlin Sing-Akademie. Sun: Tristan and Isolde with Kollo and Jones (3410 249). Philharmonie Kammerorchester 20.00 Christian Mandalet conducts RIAS Youth Orchestra in music by Reger and Schubert, with Kolla Blacher soloist in Mendelssohn's

Violin Concerto. Tomorrow: Berlin Philharmonic Orchestra plays Schnittke, Boulez, Ligeti and a Kurtág world premiere. Thurs, Fri, Sat and Sun: Giulini conducts (2614 363)

BONN

Oper 20.00 Vaclav Neumann conducts *The Barbered Bride*, with a cast including Alfred Muff as Kecal and Graham Clark as Vasek, also Sat. Tomorrow: *Faust*, with Juan Pons in title role. Thurs and Sun: Pelléas et Mélisande (773667)

BUDAPEST

Academy of Music 19.30 Andras Ligeti conducts Hungarian State Symphony Orchestra. Tomorrow: Donald Johanes conducts Budapest Symphony Orchestra. State Opera 19.00 Les Contes d'Hoffmann, also Fri. Tomorrow: Erik Theodor 19.00 La Gioconda, opera by Ponchielli sung in Hungarian, also Fri. Pre booking at Philharmonic booking office, Vorosmarty ter 1, and central theatre box office, Andrássy ut. 18

GLASGOW

Royal Concert Hall 19.30 Riccardo Chailly conducts Royal Concertgebouw Orchestra in Bruckner's Fifth Symphony (041 227 5511). The orchestra plays an alternative programme tomorrow at Birmingham's new Symphony Hall (021 782 8822), and then visits the Barbican in London on Fri and the Chatelet in Paris on Sat

LONDON

MUSIC Covent Garden 19.30 Hildegard Behrens sings *Tosca*, with Neil Shicoff as Cavaradossi and Samuel Ramey as Scarpia, also Fri. Tomorrow and Sat: Carmen. Thurs: David Bintley's new ballet *Cyrano* (240 1066)

Coliseum 19.30 Monte Jaffe sings title role in Stephen Sondheim's new opera *Timon of Athens*, staged by Graham Vick and conducted by Graeme Jenkins, also Fri. Tomorrow and Sat: Peter Grimes. Thurs: Mackerras conducts *The Cunning Little Vixen* (838 3181)

Royal Festival Hall 19.30 Paolo Olli conducts Royal Philharmonic Orchestra in concert performance of Nabucco, with Metello Manuguerra in title role and Julia Varady as Abigaille. Thurs: Montserrat Cabellé sings opera arias (928 8800)

Queen Elizabeth Hall 19.45 Jonathan Brett conducts English Classical Players in Brahms' *Serenade No. 2*, Dvorak's *Czech Suite* and Mendelssohn's *Violin Concerto*, with Maurice Haddon. Tomorrow: Fischer-Dieskau sings Schubert (928 8800)

Sadler's Wells 19.30 Opera 80 begins a two-week season featuring performances of *Die Zauberflöte* and *Don Pasquale*, sung in English (278 8916)

Barbican 20.00 Mariano Torres Spanish Dance Company presents *A Night in Seville*, popular

flamenco dance musical. Also tomorrow, Thurs and Sat: Fri: Cahilly conducts the Royal Concertgebouw Orchestra. Sun: Henry Mancini in concert (838 8891)

THEATRE This week's Royal Shakespeare Company repertoire at the Barbican includes *King Lear* (tonight), directed by Nicholas Hytner with John Wood in the title role. This is followed by Bill Alexander's production of *Much Ado About Nothing* (tomorrow) and *Love's Labour's Lost*, directed by Terry Hands (Fri and Sat). In the Pit, the RSC is showing Christopher Marlowe's *Edward II* and *The Last Days of Pompeii*, Nick Dear's adaptation of *Tirso de Molina's* bawdy morality play. For information about other shows, call Theatreline from anywhere.

In UK: Plays 0836 430858 Musicals 0836 430860 Comedies 0836 430861 Thrillers 0836 430862

MUNICH Staatsoper 19.30 Gerd Albrecht conducts Harry Kupfer's production of Tchaikovsky's *The Maid of Orleans*, also Fri. Tomorrow: *Cinderella* (ballet). Thurs and Sun: Boris Godunov (22116)

NEW YORK DANCE Metropolitan Opera 20.00 American Ballet Theatre production of *La Bayadere*, also tomorrow and Thurs. Season runs till June 22, with daily performances except Sun (362 8000)

New York State Theatre 20.00 NY City Ballet in works by Balanchine, Jerome Robbins and Peter Martins.

Season runs till June 30, with daily performances except Mon (870 5570)

THEATRE Off Broadway the following shows can be recommended: *Breaking Legs* a comedy by Tom Dulack about what happens when some Mafia godfathers want to invest in a Broadway show (Promenade Theatre). The Realistic Rise of Arturo U, directed by Carey Perloff, is Brecht's savage parody of the American dream. It is staged in Chicago (Repertory Theatre). Night Sky, starring Joan Macintosh, is Susan Yankowicz's play about a brilliant astronomer who suffers a head injury, leaving her unable to speak, and struggles to create a new identity and language (Judith Anderson Theatre). Ticketron (248 0102) answers inquiries and sells tickets for shows on Broadway

PARIS DANCE Théâtre de la Ville 20.30 Shijima (1988), ballet by Ushio Amagatsu. Runa till Sat (4274 2277)

Théâtre des Champs-Élysées 20.30 Mark Morris Dance Group. Run till Sat (4720 3587)

MUSIC Chatelet 19.00 Thomas Zehetmair accompanied by Emanuel Ax plays violin sonatas by Mozart, Debussy, Schoenberg and Brahms. (4028 2540)

Salle Pleyel 20.30 Andras Schiff plays piano music by Bach, Reger, Handel and Brahms. Tomorrow: concert by Lamoureux Orchestra including Villa Lobos' *Guitar Concerto*. Thurs, Fri and Sat: Semyon Bychkov conducts

Orchestra da Paria (4561 0630)

PRAGUE

National Theatre 19.00 Armida, opera by Dvorak, also Fri. Other Dvorak opera performances this week include *Rusalka* (Thurs) and *The Devil and Kate* (Sat). A new production of *Die Entführung aus dem Serail* opens in the Smetana Theatre on Sat, followed by a performance of Don Giovanni on Sun.

Prague Castle 20.00 Frank Peter Zimmermann, accompanied by Alexander Lonquich, plays violin sonatas by Mozart, Bartok and Prokofiev. Tomorrow: The Consorts of Musicale directed by Anthony Rooley, plus recital by Barbara Hendricks.

Pre-booking at Stuna ticket agency, Wenceslas Square 28

VIENNA

Staatoper 19.00 Peter Schneider conducts *Die Zauberflöte*. Tomorrow, Fri and Sun: Lucio Silla. Thurs: *Entführung*. Sat: *Idomeneo* (51444 2960). Tomorrow at Theater an der Wien: last chance to see Jonathan Miller's Vienna festival production of *Le nozze di Figaro* (588 1878)

Musikverein 19.30 Georges Pretre conducts Vienna Symphony Orchestra in Haydn's *Symphony No 101* and Mahler's Fifth (505 8180)

Konzerthaus 19.30 Robert Holl, accompanied by Rudolf Jansen, sings *Lieder* by Schubert, Füssli and Pfitzner. Tomorrow: Julius Blüthner's *Greatest Mass*. Thurs and Fri: Arditi Quartet (7124 8660)

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Tuesday May 21 1991

Fast-track or the buffers

ONLY US Congressmen who want to go down in history as having wrecked the world trading system should vote against the Bush administration's request for a two-year extension of its mandate to negotiate trade agreements.

The so-called fast-track authority that is encapsulated within this mandate expires at the end of the month. Without it there would be no chance of completing the Uruguay Round of multilateral trade negotiations or of agreeing the negotiated free-trade pact with Mexico. Even for those who wrongly believe the US should forsake multilateralism for regionalism in its trade policy, the case for extension is compelling. Without it the US would not even have this choice. It would be thrown back on aggressive unilateralism. This would eventually redound against its own exporters as retaliation elsewhere choked off their overseas sales.

Yet while a vote in favour of the fast-track would lift the immediate uncertainty surrounding the Uruguay Round, it would be insufficient to ensure its eventual success. Protectionist pressures are not abating. On the contrary, they are growing as the world economy slows. All participants should redouble their efforts to complete the Round quickly, if possible by the end of the year.

Acute pressure

Mrs Carla Hills, US trade representative, has fought hard for an extension to the fast-track. Expectations in Washington are that Congress will now comply, however grudgingly. Yet this will also raise new expectations. A positive vote would mean she could no longer expect to be applauded at home, simply by standing firm in the Uruguay Round. Instead she will be under acute pressure to deliver.

The temptation to fudge a deal with the European Community on the divisive issue of farm subsidies would look beguiling. The Round could then be dressed up as a success, but it would have achieved little in practice to enhance the status of the Gatt and strengthen the multilateral trading system.

This temptation may have been made all the stronger by

the way in which Mexico has taken centre stage in the fast-track debate. The Uruguay Round has enjoyed benign neglect. This suggests it is now seen as an innocuous affair, to be wrapped up quickly for the sake of international harmony but of no direct relevance to the real problems of US competitiveness. Meanwhile, a huge would let an anguished Brussels off the hook of farm reform.

Yet it would be a great mistake for either Washington or Brussels to try to cobble together a deal simply for the sake of political expediency. Other players, notably the Cairns group of farm exporting nations, would object. Moreover, the Round would only be a true success if it were to curb unilateralism in US trade policy and allay the threat of bitter trade conflicts by imposing genuine discipline on farm support.

Mature approach

Other participants are agitated at the petulance of top negotiators in both the US and EC, which has left them barely on speaking terms. Mr Arthur Dunkel, Gatt director-general, indicated in London this week that the world expects a more mature approach. Substantive reform is the only way to secure the potential benefits of the Round for billions of people.

The US must accept the obligation to reduce unilateralism. It is no use pretending, as in Washington newspapers do, that disputes with countries like Japan are somehow special and should be handled outside the confines of the Gatt. Equally, the US does not have the sole right to decide when and how individual service sectors should be opened up.

The political price of curbing unilateralism would be very high. Washington would never pay it without substantial cuts in EC farm support. Europeans who think otherwise are guilty of flagrant self-deception.

A fast-track extension would provide one last opportunity to pull back from the brink of anarchy in trade. Exploiting it should not be portrayed as political sacrifice, but as what it really is, enlightened self-interest.

The post-16 caucus race

HOW CAN the government raise the proportion of young people who stay on at school or college after 16? In a world where competitive advantage lies largely in the knowledge and skills of a nation's workforce, finding the right answer is of paramount importance.

The full-time education and training stakes in England and Wales eliminate runners almost as fast as the Great National. Nearly half the field drops out at the earliest possible point in the race - with the end of compulsory education at 16. After another year, only a third of young people have stayed the course. By 18, fewer than one in five remains in full-time education or training.

Yesterday's white paper on education and training aims to raise the numbers staying on to the levels in other industrial economies where 80 or 90 per cent stay on beyond 16 and more than half are still in the race by 18. The government attributes the current rate of attrition to the poor image of vocational qualifications - seen as a second best for those unable to fast-track the grade in the academic stakes. The solution offered is a new and improved system of vocational qualifications to be introduced by the end of 1992. These qualifications will count towards a new diploma which will become the entry requirement for higher education.

Job guarantees

The white paper contains a lot of other worthwhile measures besides, including the opening of schools to part-time and adult students and formal links between the local authority careers service and the TECs. The training credit scheme is to be extended to every 16- and 17-year-old leaving full-time education, providing a voucher which can be cashed in for training in the future. And the "competence" trial pioneered by the now-defunct Inner London Education Authority is to go nationwide, offering young people guarantees of a job with training if they meet goals they agree with local employers and their schools or colleges.

But it is on the proposals for a unified approach to post-16 qualifications that the white paper will be judged. Is it credit-

ble to assert that giving formal equivalence to academic and vocational qualifications will lead to parity of esteem? Will employers, gatekeepers of higher education or young people? Will an Alice in Wonderland-style caucus race in which all who enter win prizes attract more young people to stay on than a steeplechase?

Highest hurdle

The answer is probably that it will, but not nearly enough - because it fails to remove the highest hurdle in the post-16 education stakes, the A-level examination system. This highly refined procedure for selecting a small minority of pupils to go on to degree courses dominates the academic agenda for post-16 education, mainly for the convenience of the universities. It often damages those who succeed in it by excessive specialisation, making a virtue out of being a specialist who cannot communicate and arts specialists who can barely calculate percentages.

More seriously, it limits the options of the four out of five young people who cannot hope to achieve passes at A-level and thus have little opportunity to secure academic qualifications after 16.

The virtue of the A-level system is that it provides a strong start for students to achieve high standards at university in undergraduate degree courses which are among the shortest in the industrial world, at no little saving to the exchequer. No doubt this is why the white paper recommends the retention of A-levels undiluted, though with further development of the AS levels which seek to achieve the standard of A-levels with half the content. But it leaves as the pinnacle of academic achievement in England and Wales success in an examination whose main feature is that it excludes most young people from its scope.

This not good supply-side policy for a knowledge-based society. The problem is hardly solved by an administrative solution which insists that every qualification is henceforth equal. What is needed is a range of qualifications suited to the full range of talents and disciplines, between which it is possible to make free choices.

If British politicians agree on anything, it is that their country is the thick man of Europe.

The continental comparisons are damning, familiar and unquestioned. Fewer Britons remain in full-time education in the UK than in any other advanced industrial nation. Of those who leave, a pitifully small number receive skilled vocational training. And those who stay on specialise so early and so narrowly that illiterate engineers and innumerate historians are par for the graduate course.

With yesterday's white papers on further and higher education, all the main parties have announced their plans for kick-starting the learning process. How do they measure up in the four critical areas: A-level reform, vocational training, the planning of 16-19 provision, and the expansion of higher education?

● A-levels: "We love comparing ourselves to Europe," says Mr Richard Pearson of the Institute of Manpower Studies, "but we should start with Scotland for inspiration." It is not simply that more Scots remain in full-time education beyond 18. Scots who stay on study four, five or six subjects at Higher level, a far broader grounding in A-levels provide. The Higher is a one-year course, so university entrants north of the border have less specialised knowledge than their English counterparts. But four-year first degrees mostly take care of that.

The Higher is under review, with calls - sidestepped in the separate white paper on education in Scotland - for it to be turned into a two-year course. That done, it would approximate to the five-subject A-level proposed for England and Wales by Professor Gordon Higginson's official inquiry in 1988.

The Higginson report is warmly endorsed by most of the education world, where A-levels are naturally less than ideal. Yet it has long been a political dead duck. Its fate speaks volumes for the party politics of post-16 education.

For the Conservatives, more means worse. Spurred by the right and the public schools, Tory education secretaries (there have been five in 10 years) condemn - in knee-jerk fashion - any questioning of the so-called "A-level gold standard". Mr Kenneth Clarke does so again in his white paper, beneath the camouflage of the new "advanced diploma".

A-levels survive unchanged. Yet why should five-subject, as opposed to three-subject, courses imply lower standards? The white paper gives no convincing answer. They might as well be called the A-levels and the objections to those come from the Treasury, not from the universities.

Labour and the Liberal Democrats, on the other hand, go well beyond Higginson and want to abolish the A-level entirely, replacing it with modular-based post-16 courses for both academic and vocational students.

Mr Jack Straw, Labour's education spokesman, insists that academic standards will be maintained, and talks of "core skills" linking vocational and academic modules. Yet these "core skills" turn out to be formulations like "values and integrity", "positive attitude to change" and "under-

standing of work and the world" - all very worthwhile, but of dubious value in constructing a common curriculum for post-16.

Bottom of the class

WHO STAYS ON:
HOW BRITAIN COMPARES

Participation of 16-19 year old males in full-time education and training (as a percentage of age group)

| | Age 16/17 | Age 17/18 | Age 18/19 |
|---------------------------|-----------|-----------|-----------|
| 1987-1988 (Italy 1986-88) | | | |
| France | 80.3 | 69.3 | 57.9 |
| Germany | 84.8 | 81.7 | 67.7 |
| Italy | 84.0 | 47.0 | 50.0 |
| Japan | 88.5 | 87.5 | 30.4 |
| Spain | 64.7 | 55.5 | 18.5 |
| UK | 51.3 | 32.7 | 57.3 |
| US | 94.6 | 88.6 | |

* Data is female. † England, Wales & Scotland aggregated.

There are higher participation rates in Scotland.

Source: Royal Society

School leavers' highest qualifications

| | UK | France | West Germany |
|--|-----|--------|--------------|
| University entrance level (2 or more 'A' levels) | 15% | 25% | 30% |
| Intermediate level (1 'A' level and below) | 40% | 55% | 60% |
| Low level school leaver (below 'C' level) | 35% | | |
| No qualifications | 10% | 10% | 10% |

* or international equivalent

Source: CES (1988)

standing of work and the world" - all very worthwhile, but of dubious value in constructing a common curriculum for post-16.

Scots may be right to fear that Labour and Liberal ideas have more to do with crude social engineering (an end to A-level "elitism") than with life-chances and national efficiency.

● Vocational training. Rather than jump A-levels and vocational qualifications together, the white paper proposes to create a streamlined, more attractive set of vocational qualifications. The National Council for Vocational Qualifications will be responsible for overseeing their development and implementation.

This reform is to go hand-in-hand with reforms to the careers service, an extension of training credits to all 16- and 17-year-olds in school, and new "ordinary" and "advanced" diplomas, aimed respectively at GCSE- and A-level standard and their vocational equivalents. Ministers intend the diplomas to raise the prestige of vocational courses without devaluing the academic, and students will be able to mix the two to attain them. Yet virtually no schools currently offer BTEC courses; it is not clear how the diplo-

mas are going to encourage them to do so. The success of the new framework will depend more than anything on the readiness of employers to train their staff or to release them for training. The white paper is silent on the question of compulsion: ministers clearly hope that company executives on the boards of the Training and Enterprise Councils - there are now 675 of them in all - will encourage the others. In a worsening recession, that may be too much to expect.

● 16-18 provision. The provision of post-16 education is highly fragmented, and will be still more so after the white paper. For every four 16- to 18-year-olds in school, there are three full-time in sixth-form, tertiary or further education colleges. Until now, local education authorities have had responsibility for planning local provision, and they have generally moved towards colleges - often in the teeth of opposition from schools losing their sixth-forms in the process. The institutional pattern varies greatly across the country: in some areas competition reigns; in others there is, effectively, a monopoly supplier.

Colleges themselves are mostly keen to gain their freedom, provided the new finan-

cial regime is favourable. "If the money is forthcoming," says Mr Olive Wickham, principal of Oxford's 13,000-strong further education college, "then there are clear advantages in running our own show and being free from a local political process beyond our control." He discounts Hobbles' fears of anarchy: the college is keen to maintain its "very good relationship" with both the local education authority and the local upper schools (they currently produce a single post-16 prospectus).

However, Oxfordshire's chief education officer, Mrs Jo Stevens, is less sanguine. "Planning post-16 is already fraught; it may become almost impossible, particularly if a large number of schools opt out" - as Mr Clarke hopes they will.

A proposal to create a tertiary college in Banbury, in the north of the county, has already been dropped despite broad local support. If the new system proves incapable of managing change, a future government may have to create special local bodies to oversee planning blight. Perhaps it will call them "local education authorities".

The colleges themselves will need clear and close guidance from their new funding council. Most have only limited experience of managing their own finances; many are small and vulnerable. The polytechnics and colleges funding council has its hands full with only 84 institutions, and its latest report acknowledges that eight of them face "severe financial problems". There is some concern that even with a regional sub-structure the new colleges funding council, with nearly 300 institutions to its name, may prove inadequate for the job.

● Higher education. Progressive elimination of the legal division between the 41 universities and 33 polytechnics, in England and Wales, and the merging of their funding councils, has long been on the cards. But the change may be more apparent than real. Higher education institutions earn their own reputations, and their formal titles have little to do with it.

Proposals on higher education funding may, in the medium term, prove far more consequential. Mr Clarke is proposing a big shift from grants to fees, in effect introducing a market into the back door. This should encourage institutions to market themselves more effectively, but their ability to expand will ultimately depend upon resources, unless standards plummet. And since fear of the southern middle classes has led the government once again to resist measures to raise an appreciable proportion of funding from students themselves, as does virtually every other higher education system in Europe, the sector can probably expect a cash-starved 1990s to follow a lean 1980s.

Post-16 education is now at the forefront of the political battle. There are broad fields of consensus, but more than sufficient areas of disagreement to make it a political football. If it does, the consequences will be debilitating. "Meanwhile," as Mr Pearson of the Institute of Manpower Studies remarks acidly, "the rest of Europe is not waiting for us to catch up."

PERSONAL VIEW

A solution for east Germany

By George A Akerlof, Andrew K Rose, Janet L Yellen and Helga Hessenius

In a typical British or American recession, unemployment rises by 2 or 3 percentage points over a year or two, while real GNP falls about twice that much. In July 1990 the month following German monetary unification - east German industrial output fell by more than 25 per cent. Unemployment, including short-time work, now affects more than 30 per cent of the eastern labour force. There are few signs that the situation is improving.

What is to be done? At the time of monetary unification, eastern wages were much too high in comparison with western productivity. Since currency union, eastern wages have risen quickly, by almost half since the beginning of 1990. At current wages, by our calculations, enterprises employing only 6 per cent of eastern industrial labour can sell their output at prices high enough to cover their operating costs. Massive lay-offs are occurring. Firms which are losing money at these wages cannot be sold to entrepreneurs who will operate them. Thus, privatisation will proceed slowly even if the ambiguity of property rights and similar problems are sorted out. And these wages, which are too high for eastern productivity, will be insufficient for an east German economic miracle. Wages in eastern Germany last July were eight times as high as in Poland and roughly 60 per cent of US levels.

Businesses are being expected to shoulder the burden of rapid wage rises. Instead, they are staying out of east Germany. Why would private business take on such a burden? How can the political guarantees of high income for easterners be reconciled with the need for realistic labour costs? Wage subsidies to eastern businesses are the solution. The German government should offer employment bonuses - payments which are a specified fraction of each worker's wage - to all private non-financial firms, new and old, hiring workers in eastern Germany. The reduction in labour costs would enhance profitability and the desirability of eastern firms to investors. State-owned enterprises could be privatised by auctioning them to the highest bidder. The new owners would restructure them. Those which cannot be sold would be liquidated.

Wage subsidies would enable many eastern firms to price their products competitively in relation to their quality. These firms could thus be privatised. More important than the preservation of jobs in the old state-owned enterprises, large wage subsidies would encourage the new investment needed to modernise the economy. Direct investment subsidies are now being offered to stimulate capital formation. Wage subsidies also stimulate investment by raising its profitability.

Wage subsidies would create an environment in which market forces can work. They create the correct incentives for investment, the creation of jobs, and the liquidation or sale of state-owned property. Privatised firms which respond to market signals will be the real source of the transition to a western economy, since they have appropriate incentives to raise productivity by introducing new management, technology, products, and work habits.

Employment bonuses would reduce migration. In February, we surveyed eastern workers. We found that most easterners want to stay in the east as long as work is available, even at current pay, which is roughly half that in the west. Best of all, wage subsidies may actually save the government money. The large wage subsidies required to reduce eastern unit labour costs to work levels are costly. But most of these costs will be incurred in their absence, since the German government is already committed to a generous programme of unemployment benefits. The direct costs of wage subsidies will be offset by reduced governmental payments of unemployment insurance benefits, as well as higher government revenues from income taxes, social security contributions and enhanced receipts from the sales of former state enterprises.

Wage subsidies should be part of a social contract. Unions must agree to wage restraint in return for the employment bonuses which will insure jobs. To discourage such wage increases, we propose an automatic decrease in subsidies if eastern wages rise. In particular, we recommend that wage subsidies be made proportional to the gap between western and eastern wages. This scheme not only eliminates the tendency of unions to ask for higher wages, but is also self-terminating: wage subsidies will automatically wither away as the east catches up with the west.

What are the alternatives to employment bonuses? The main alternative is a laissez-faire policy of waiting. Eventually, high eastern unemployment will lower eastern wages. Eventually, enough investment will occur for east German productivity to reach western levels. But history shows that these outcomes, if they occur, take a long time. Meanwhile, easterners will migrate to the prosperous west German states. Since east Germans do not want to move, employment bonuses to speed the eastern transition make economic and political sense.

Lamont mints it

Chancellor of the Exchequer Norman Lamont has been having a bad few days.

First came the gaffe in which he said rising unemployment was a price worth paying to get Britain's inflation down. Then reports that he was going to sue the sex therapist who has set up shop in his west London home; and now, to cap it all, the Treasury and Civil Service Committee is cracking the whip over what can fairly be called a Treasury coinage scam.

A report from the committee yesterday could find little good to say about the latest series of changes to the UK coinage system for which Lamont, as Master of the Mint, is ultimately responsible.

Clearly, the committee regards the system as inconvenient, with the seven denominations in current use excessive. It suggests getting rid of the heptagonal 50p coin, and replacing it with a round and almost weightless 5p for an over-swift introduction.

Its most serious quibbles, however, are reserved for the 50p piece. Not only is it too heavy, the committee says, but its existence has become unnecessarily costly.

The reason is that the introduction of the £1 coin has killed demand for 50p pieces, producing what the committee describes as a "chronic surplus". As a result, London and Scottish clearing banks are having to store them.

With the current surplus of the things running at 50m coins, storage is a weighty problem - so much so that outside contractors are having to be used. Worse, since the coins earn no interest, the banks sitting on £25m worth of them are suffering a marked loss of revenue.

Oddly, the Treasury goes on insisting that the 50p pieces must be kept in existence, on the somewhat suspect grounds that they will eventually be

OBSERVER

needed. By a happy coincidence, however, the result is that the Treasury has secured interest-free borrowing for the government at a time when Lamont is presiding over a sharp swing into public-sector deficit.

Well connected

Good economists seldom seem to retire these days, so it comes as little surprise to find that Christopher Johnson, 60, has been appointed UK adviser to the Association for the Monetary Union of Europe within days of announcing that he is to leave his post as chief economic adviser at Lloyds Bank.

In his new job, Johnson will spend much of his time explaining to British businessmen what is involved in the increasingly likely move to monetary union and a single European currency. He will focus his efforts on industry and the banks, but will also be active in spreading the word to MPs and civil servants.

Two attributes which will help him in his new post are his array of contacts and a quietly persuasive manner - one which was an earlier career. Before joining Lloyds in 1977 he spent 15 years at the FT, where he was successively Paris correspondent, diplomatic correspondent and foreign editor. He ended his FT days as managing director of the paper's Business Enterprises division and a director of the company.

Wounded knee

Central Independent Television, the Midlands station perhaps best known for its Spitting Image satirical puppet show, has found itself on the receiving end of criticism over an apparent bonanza for directors in the



current competition for franchise renewals.

If the company succeeds in retaining the Midlands franchise, it seems, six senior executives will stand to share a total cash bonuses of up to £1.5m provided they serve out their contracts.

Fair enough, one might think: other independent television stations are planning to reward their executives similarly if they win. Except that, since nobody is bidding against Central for the Midlands franchise, it seems like money for old rope. Central yesterday put up a robust defence of the deal. Tying in a strong executive team in this way was undoubtedly a factor in staving off the threat of a rival bid, it said. And how could it have foreseen that no competition would emerge when it drew up the agreements last year?

It's like asking why Spurs put Gazza on the team for the Cup Final on Saturday when he was going to be taken off with a torn ligament after 15

minutes," it said, in an analogy which left one struggling to identify Central's wounded knee.

Exit Traub

Over the years Marvin Traub, chief executive of Bloomingdale's and a dapper favourite of the New York glitzy and gossip columns, has become almost synonymous with the famous department store chain. Now they are parting company.

When the cash-hungry Campeau Corporation put Bloomingdale's on the block in September 1989, Women's Wear Daily proclaimed that the chain "belongs to Traub". But 66-year-old Traub failed in his attempt to acquire the chain of 17 stores he had run since 1976, and Bloomingdale's, along with Campeau's Federated and Allied US retailing empire, fell for protection from creditors under Chapter 11 of the federal bankruptcy code.

Although Traub presided over Bloomingdale's decline, analysts said his reputation as a retailing wizard was not tarnished by the problems that have plagued Bloomingdale's since the Campeau acquisition. "He was not responsible for the leverage which led to the Chapter 11. Nor was he responsible for the recession," says one analyst. But Bloomingdale's has been criticised for not cutting costs sufficiently or improving branch stores.

Traub, whose tenure had been due to run till 1993, will remain until August to help with the transition. His successor is Michael Gould, 48, who has been head of Gloria Beverly Hills, the Los Angeles-based fragrance operations of Avon Products, since 1987.

Fishy

How many surveillance does it take to change a lightbulb? Banana.

YOUR VERY OWN MOTORWAY...



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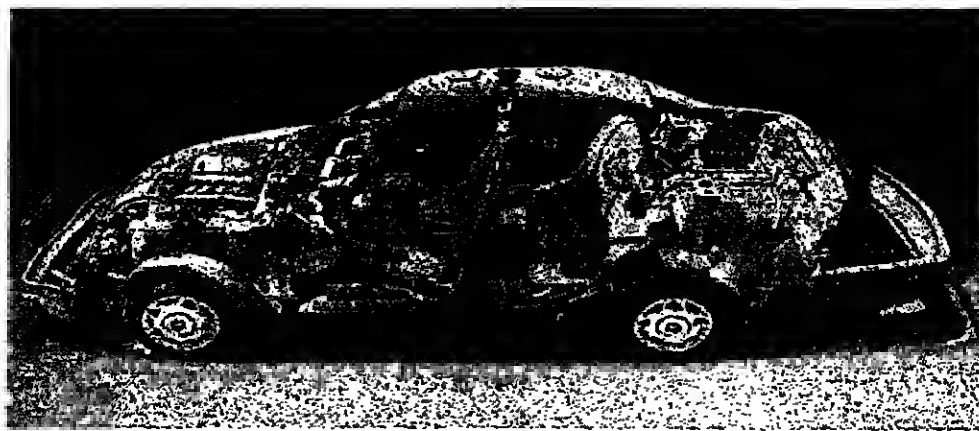
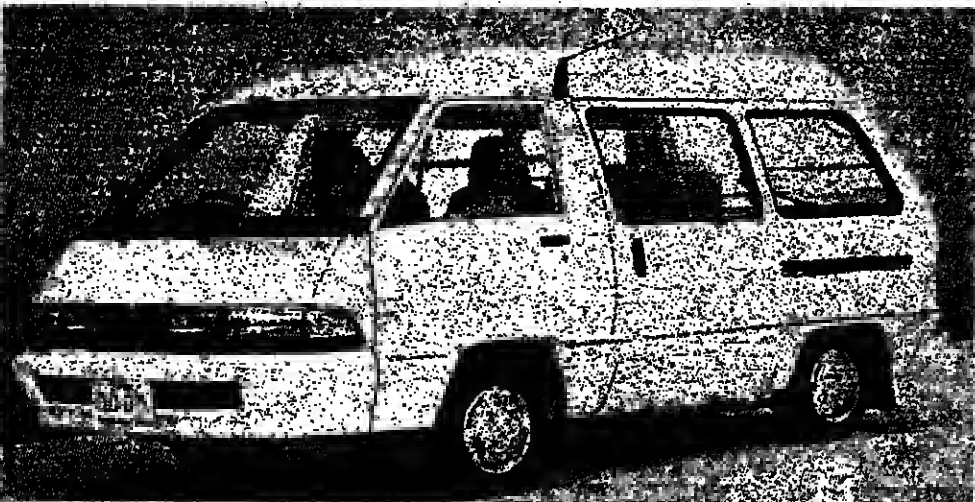
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THE WEST LANCs PROJECT

CAR OF THE FUTURE

Tuesday May 21 1991



Toyota's leisure van (left) qualifies as a Californian "ZEV" (zero emission vehicle) and cruises at up to 85 kph for more than 100 kilometres on its nickel cadmium battery pack. BMW's new 3 Series (above) points the way to easier recycling.

ally to refine catalytic converters, under the latest US Clean Air Act, would be better spent tuning up older cars, which account for about 85 per cent of vehicle pollution.

Dr Helko Barske, Volkswagen's research chief, also suggests that Americans would be much better off "driving one litre cars, not four litres". What particularly annoys him is threats to impose draconian fuel economy targets on the industry, "and yet, when a Golf is perfect for driving around the city, these same politicians are all ordering the new S-class Mercedes which consumes 22 litres per 100 kilometres".

In the mid-1980s, VW tried to launch the Eco-Golf, fitted with electronic clutch. When stationary, the engine automatically switched off, restarting automatically if a gear was re-engaged. Since most urban exhaust pollution is generated in traffic jams, its benefits were obvious. Yet motorists were unwilling slightly to alter driving habits. VW will try again next year.

With the world car population expected to increase by about a third to 500m by the year 2025, car makers must run hard just to stand still in terms of pollutants. Dealing with traffic congestion will also be a major challenge.

Integrated traffic information systems will help to keep traffic flowing freely, but only marginally because easier traffic flows simply create more journeys.

Such systems are already in

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Editorial production
Gabriel Bouman

pilot use in the UK and Germany. Apart from route guidance, eventually they will provide localised information, via in-car terminals, such as whether and where there is a parking space free at the driver's destination area, the time between trains and so on.

These issues, along with safety and how to halve Europe's traffic fatalities, are at the heart of Prometheus, an EC motor industry research programme on which some 300 scientists are engaged.

Several years on, it has found no instant solutions. "Yet it has been successful in that it has made clear all solutions are likely to be long-term," says VW's Dr Barske.

As just one example, independent groups had previously been working on systems capable of "seeing" through poor visibility, and thus providing drivers with a potentially valuable safety aid. One was based on infra-red, the other on ultra-violet. Thanks to Prometheus, it is now known that an effective system must use both.

Controversy continues on other Prometheus aspects, such as whether motorway "convoys" can make better use of available road space, with the space between cars controlled electronically, not by drivers. That is technically feasible, but some companies, including BMW, have already made clear their resistance to anything but an advisory system - partly because of product liability issues involved.

Environmental issues will be as important as technological advances in shaping the car of the future,

writes John Griffiths. Concern has grown over exhaust emissions as more vehicles take to congested roads. Will new solutions be found to ease traffic flows?

Target for a health drive

CONCERN about atmospheric pollution, global warming and traffic congestion, allied to sombre images of Kuwait's burning oil wells, ensure that future cars will be shaped as much by legislation as by consumer preferences.

Memories of fuel queues in the 1970s oil crises, proved short-lived. The world's car industry quickly found itself catering to the demands of motorists reverting to old habits of concentrating on style, comfort and performance, rather than energy saving or exhaust emissions.

As a result, the considerable strides the industry has made in weight-saving, "slippery" aerodynamics and engine efficiency have been partially obscured by consumer demand for better equipment and trim, so that most cars are as heavy as a decade ago.

US administrations have

continued to duck the measure that could most readily curb the world's most prodigious vehicle fuel users - a gasoline tax lifting the current \$1 a gallon closer to the \$4 level paid by most of the world.

Yet California, in particular, is providing the main catalyst for change in the car of the future, at least in terms of air pollution and the controversial issue of global warming.

From 1994, under Californian state legislation, the percentage of vehicles with drastically reduced exhaust emissions must rise every year under a programme lasting until the year 2000. In 1994, 30 per cent of cars sold must be "transitional low emission vehicles". From 1995, "ultra low emission vehicles" must start appearing and from 1998 2 per cent of sales must be of battery-powered cars, rising to 10 per cent by the year 2000.

That means around 100,000 electric vehicles a year and the birth of a new industry.

These standards are aimed at sharply reducing the carbon monoxide, hydrocarbon and nitrogen oxides emissions which often reduce Los Angeles air to atmospheric soup. Their technical feasibility remains uncertain - even allowing for the ritual protests of an industry faced with spending billions in attempting to comply with them.

Yet their effect, and the motor industry's uneasy awareness that where California leads, the rest of the

world tends to follow, is to set manufacturers hunting hard for cost-effective technical and engineering solutions.

Many will be made possible only by yet more intensive use of electronics, a major growth area for vehicle component makers and specialist electronic groups. The continuing integration of the car's various systems, such as engine management, suspension and even steering under central electronic control will have made the "intelligent" car a market reality by the year 2000.

Engine research is remarkable in its variety. Toyota, for example, has a 2.5 litre, supercharged diesel engine capable of burning a limousine around a test track at over 100mph. It

emits only about a third the level of nitrogen oxides - the culprit in acid rain - of conventional engines.

Also being developed are "flexible fuel" engines running on petrol or "cleaner" fuels such as methanol, two-stroke petrol engines less than half as big as conventional four-strokes, and even gas turbines.

All, however, have their drawbacks and none is certain of meeting all California legislation at viable cost. Diesels, for example, are economical and cleaner than petrol engines - except for almost certainly needing traps to capture tiny particles suspected of causing cancer.

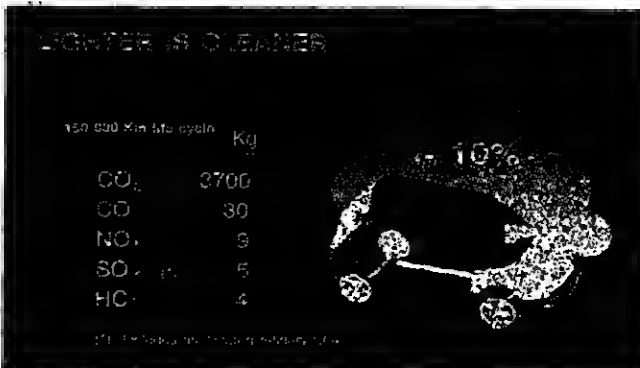
Electric vehicles offer the biggest challenge of all,

because of current batteries' inability to store large amounts of energy.

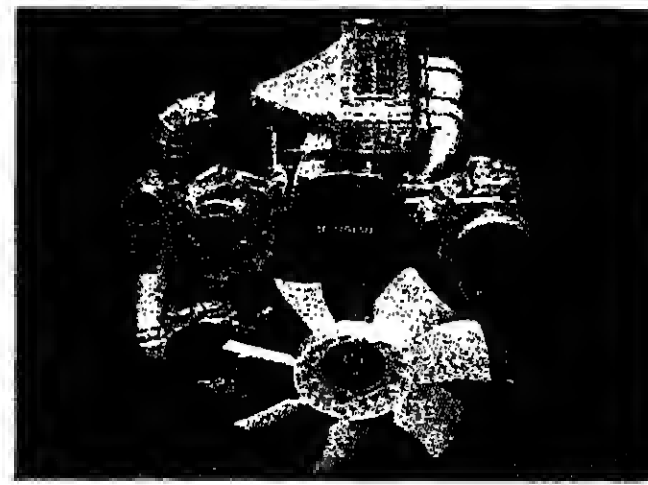
Ricardo Consulting Engineers, the UK engineering consultancy, may have the answer: on-board batteries and generator, partially powered and recharged by a small diesel engine. It would be driven by electric motors in each wheel, with the brakes forming an integral part of the motor and generating top-up power.

The main disadvantage - the heavy, unsprung wheels - can be overcome by component miniaturisation, says Ricardo.

Some industry figures doubt the value of much of this effort. US makers argue that the \$600 a car needed margin-



In search of reduced emissions: some effects of weight saving (above) and Toyota's S-2 supercharged, two-stroke diesel engine (right) which, the company says, holds out the prospect of meeting still exhaust emissions legislation



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CAR OF THE FUTURE 2

John Griffiths looks at the extensive Saturn project in Tennessee

GM's \$4bn plastics path

WITH THE launch of General Motors' \$4bn Saturn project last year, plastic composites reached a new threshold in terms of their use in volume car applications.

The Saturn cars, built at a greenfield site in Tennessee and aimed at rivaling Japanese cars for quality and cost, break new ground in having bodies made up of thermoplastic vertical panels hung on a steel spaceframe, instead of a conventional steel monocoque.

No less significantly, Saturn capacity – unlikely to be used immediately because of the depressed US car market – is 330,000 cars a year, an unprecedented volume for a vehicle making such extensive use of plastic composites.

Yet Saturn is only the latest of several vehicles to make extensive use of such materials to be developed by GM, which to date has shown by far the greatest commitment of all vehicle makers to exploring the possibilities presented by plastics.

It also has in production a range of multi-purpose leisure vehicles, such as the Chevrolet Lumina, which uses plastic body panels on a steel spaceframe and capacity for which is over 200,000 units a year. The Lumina is a successor to the Pontiac Fiero mid-engine sports car of the mid-1980s, whose plastic-clad body reached a peak production of around 100,000 units annually.

Saturn differs from its predecessors not just in volume, but in having its panels made of thermoplastics rather than thermoset materials. The differences are fundamental. Thermosets take longer to process and when the vehicle's life is over, the panels can only be chopped up for road fill or other low-grade uses, or burned to create energy.

Thermoplastics allow shorter cycle times to produce components, and can be melted down and reused, although usually also in lower grade products.

Yet even the most ardent advocates of the use of plastics in vehicles, notably the large chemicals groups themselves, are not suggesting that the car of the future will consist primarily of composites, with metal reduced to mechanical roles.

GM, starting with a completely "greenfield" project, has been able to maximise the advantages of composites to an extent to offset the still severe disadvantages – most notably slow cycle times to produce components and cost.

Thus the Saturn project has gained from the lower tooling costs to produce plastic panels compared with stamping steel, reduced lead times, the ability to mould in one piece a complex body part which otherwise might require the welding together of four or five separate metal pressings and – as a result – actual reductions in component costs.

Other bonuses, to be felt in the market-place, include increased resistance to damage and corrosion and – because of cheaper tooling and construction techniques – the ability to update models with greater frequency more cheaply.

So far, GM's main rivals show little intention of following it down the same path. They remain unconvinced that the benefits are worth such a large-scale effort and are adopting a "wait and see" approach on how the GM products fare.

Similar caution is being shown by the industries of Europe and Japan. Renault is the only major manufacturer to have developed a plastic-panelled vehicle in anything approaching high volume –

Even ardent advocates do not suggest cars will consist primarily of composites

around 60,000 units year – and the vehicle itself, the Espace multi-purpose vehicle, is relatively expensive. In Japan, Toyota and Mazda are among manufacturers engaging in that there is a long way to go yet before plastic bodies seriously rival steel.

A key extra consideration for the European and Japanese industries is the much higher cost, by comparison with North America, of the main raw material for plastics, oil.

The prospect of a plastic composite body completely supplanting steel, to which engine, gearbox and other major components would be mounted directly is even more remote, acknowledges Dr Claude Fussler, vice-president, automotive materials, of US chemicals giant Dow Europe.

However, Dr Fussler and others in the industry do envisage continuing steady inroads by composites in a number of areas. One such, exemplified in the new BMW 3 Series, is the substitution of the metal bumper girder by much lighter composites, with a saving of around 15 kilograms at each end of the car.

Composite valve covers are continuing to replace those made from steel and aluminium. More significantly yet, work is well advanced on structural composites for use in load-bearing components at the end of the 1990s. These include engine supports, cross-members and similar items – many of which can also be produced as a single part instead of fabricated from a

number of metal components.

GKN, the UK engineering group, has been supplying truck springs made of lightweight composite materials for some years. With composite road wheels, likely to weigh less than half of their steel equivalents, also in prospect, calculations made by Dow suggest that the use of composites could cut the weight of a typical European car by 175 kilograms – including the "knock-on" effects of being able to use lighter metal components – without resorting to an all-plastic body.

This would produce significant "whole-life" energy savings compared with a conventional car, if reduced engine in manufacture and improved fuel consumption were taken into account.

A possible catalyst for the speedier introduction of plastic-bodied cars may come in the form of Californian legislation requiring a percentage of cars on the roads to be battery-powered by the late 1990s. Manufacturers of such vehicles will be keen to compensate for heavy battery weight by using the lightest bodies possible. The plastics industry is already engaged in tentative talks in this area with potential electric vehicle suppliers.

The problem remains of how to get plastic component cycle times down.

With reaction injection moulding, times for some large components like front wings are already down into the 50-55 second bracket – still an inordinately long time compared with the few seconds to stamp sheet metal. It is possible to compensate partially by replicating the cheaper plastic tooling. There are limits, however. Tooling up would be economical but a third plastics line would be more expensive than one metal stamping line.

Nevertheless, the industry claims itself to have been very encouraged by the outcome of the Saturn project so far.

Part of the plastics industry's reason for optimism about the long-term prospects is also the appeal of the material to vehicle designers, and the greater flexibility of approach offered compared with steel.

Recycling, however, remains a problem for neither thermosets nor thermoplastics have the easy recyclability of metals, virtually 100 per cent of which are already recovered. There is a lot of work still to be done, acknowledges Dr Fussler, "but we are making progress."

Bumpers, for example, are already being virtually completely recycled, with new bumpers simply moulded from the old with little addition of new materials. Exactly how many times this can be done, however, remains unknown.

THE CAR of the late 1990s will be required by law to pollute less – including noise as well as exhaust emissions – and travel much further than now on a gallon of petrol or diesel.

The result is a scramble by vehicle and engine makers to produce power units capable of meeting such demands, and the emergence of new technical approaches to the issue.

Many of the projects now under way, such as an engine with plastic components developed by a European consortium led by Ford, are aimed more at investigating design areas such as weight-saving than for commercial production. The "Brite" engine, named after the acronym for the co-operative EC research programme Basic Research in Industrial Technology for Europe, uses metal only for the combustion chambers, cylinders and moving mechanical parts. It generates 30 per cent less noise than a conventional engine of similar size.

But other radical units, such as the Orbital two-stroke engine first developed by Sarich Technologies of Australia, offering more power and about a third the weight of a conventional petrol engine, are intended for production.

Indeed Ford, which took out a licence on the technology some time ago and has been developing it jointly with the Sarich group, says it expects to put a vehicle so equipped on the market before the end of the decade. General Motors has declared a similar intention.

To meet the expected demand, Orbital Engine Corporation (US), a wholly-owned Sarich Technologies subsidiary, is preparing a facility to produce 100,000 Orbital engines a year at Tecumseh, Michigan.

The engine, which lacks valves and has direct fuel injection, is claimed to have 10 per cent more power and 20 per cent better fuel economy than a comparable-capacity conventional engine.

Of potentially greater significance, Orbital says it has developed a vehicle for testing by the federal regulatory authorities in the US and which is claimed to be capable of meeting the strictest emissions standards proposed for the US for the year 2004 and even California's standards for



Ford's Brite plastic research engine

John Griffiths on new projects

Cleaning up the engine

Ultra Low Emission Vehicles.

Among other candidates – apart from electric power units – are two-stroke supercharged engines first developed by Sarich Technologies of Australia, offering more power and about a third the weight of a conventional petrol engine, are intended for production.

Used in conjunction with a catalytic converter, the "lean-burn" engine holds out the prospect – according to Toyota – of meeting the strictest emissions legislation at the same time as providing fuel economy.

Even in respect of conventional petrol or diesel engines, work on aspects of their operation holds the promise of significant performance improvements on all fronts. For example, electronic tech-

nology in conjunction with very high-speed hydraulic pumps is allowing Lotus Engineering, the engineering consultancy arm of General Motors' Group Lotus subsidiary, to develop "active" control of the engine's inlet or exhaust valve operation.

The system, as described by Mr Hugh Kemp, powertrain and systems director, is intended as a research tool rather than a production item for the foreseeable future because of its high cost. The valve is attached directly to a vertically-acting hydraulic pump which, under digital control, can open the valve many times a second to any chosen extent and at any chosen phase of the engine cycle.

What Lotus has created is, in effect, an infinitely variable camshaft. Since it is the camshaft which determines an engine's main power and

torque characteristics, Lotus is equipping itself with a valuable tool capable of short-cutting much "trial and error" traditional engine development.

The system might be seen as the ultimate development of a simpler approach developed by the Norfolk-based group, in which the engine camshaft has two profiles side-by-side, with the engine switching between the two for optimum high or low-speed performance. Other "variable" engine parameters being adopted include variable valve timing, and even compression ratios.

Only last month Ricardo Consulting Engineers, the UK engineering consultancy, unveiled a new form of variable valve timing mechanism applicable to any configuration of engine, including multi-valve units and those using either pushrod or overhead camshaft valve operation.

By means of such innovations the motor industry hopes to be able to meet increasingly harsh legislative pressures. In the US these include an expected improvement in mandatory corporate average fuel economy (CAFE) – the average obtained by the entire range of models a manufacturer has on sale – from the current 27.5 miles per gallon to 34.5 mpg in the period 1995-2000.

A more than halving of currently permitted exhaust emissions of hydrocarbons, carbon monoxide and oxides of nitrogen, coupled with possible attempts to restrict the volume of carbon dioxide, the main gas linked with controversial "greenhouse effect" – is also expected to tax engine development engineers. Currently, under US legislation cars are required to comply fully with emissions standards for 50,000 miles or five years. But a move to 100,000 miles and 10 years is regarded as inevitable.

Not least, with some countries like Switzerland already imposing "drive-past" noise tests, the industry is braced for similar legislation becoming much more widespread, with a possible requirement for external noise levels to be reduced to as low as 73 decibels (dBA). In subjective terms, this would be about one quarter of the sound level of most existing legislation of around 77 dBA.

World charges down route to electric vehicles

A MONTH ago, several oddly-shaped vehicles were to be seen not so much winding as whirling their way round part of the large complex which makes up Toyota's technical centre and proving ground of Higashi-Fuji, in the shadow of Mount Fuji.

They were a light two-seater car, a motor caravan and a bus, and they whirled because they were powered exclusively by batteries.

They were put on display to European journalists by Toyota as yet one more piece of evidence that the world's motor industry is moving, reluctantly, yet resolutely, towards developing viable electric vehicles.

Toyota is by no means alone among Japanese vehicle makers in travelling down the "EV" route. Among others, Nissan has developed an electric hatchback, Mazda and Daihatsu several light cars and commercial vehicles. Even Nippon Steel has produced a purpose-built battery car with ultra-lightweight carbon fibre body and using Mercedes driving electric motors mounted within each wheel, and is looking for partners to develop it further.

As usual in Japan, a consortium approach is also being adopted in some areas, including the development of batteries under the aegis of the New Energy Development Organisation, part of Japan's governmental energy agency.

The consortium includes Japan Storage, part of GS, which is developing nickel-zinc and nickel cadmium batteries; Yusa (nickel-zinc and sodium-sulphur); Meidensha (zinc-bromine) and Farukawa (nickel-iron). Toyota has developed its own zinc-bromide system in house but is using Meidensha on some of its development.

As with the industries of North America and Europe, the renewed drive inside Japan for more effective solutions to the electric vehicle's century-old problems of low performance and short range is motivated not so much by a desire to explore new markets as a desire not to be excluded from one – namely California's.

Under legislation prepared by the Californian state government – and which is subject to biennial review to ensure that what is required is technologically feasible – a significant proportion of electric cars will be required from 1993 as part of a drive to reduce air pollution in the smog-shrouded Los Angeles basin, in particular.

The Californian legislation requires 2 per cent of all cars, vans and light trucks sold in the state in 1993 to be "zero emission" vehicles (ZEVs), rising to 10 per cent in the year 2003.

Barring the emergence of some unexpected new technology, "ZEVs" can only mean

electrically-powered cars – 30,000 in 1993, rising to 150,000 a year in 2003.

Manufacturers which do not develop such ZEVs, and various other categories of low-emission (LEV) and ultra-low emission (ULEV) cars face exclusion from California's market as a year market.

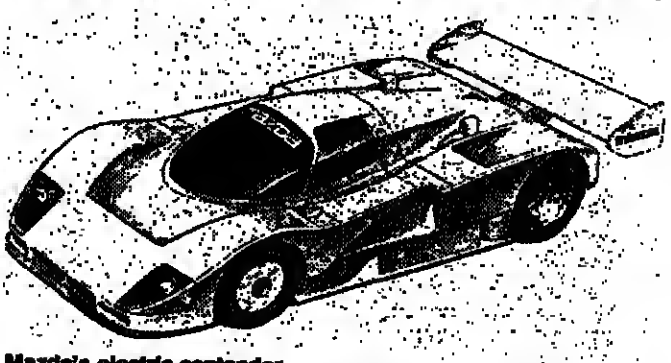
The compensation for manufacturers for the large development spending inevitably involved is that at least the numbers of vehicles required to be sold should generate just enough economies of scale to make such vehicles viable, rather than merely "loss leaders".

The world industry is taking the issue seriously, mindful of the fact that Californian environmental legislation has tended strongly to influence

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Mazda's electric contender

legislators in other developed regions of the world.

The task confronting the industry involves spending billions of dollars. General Motors, Ford and Chrysler recently agreed a programme with the US federal government under which more than \$1.2bn is to be spent over 12 years to develop advanced battery technologies.

Development of vehicles themselves is proceeding apace. General Motors has already designated a plant at Lansing, Michigan, to manufacture a car based on the impact, a prototype already shown to be capable of up to 100 mph and a range of 120 miles. The plant is due to come on stream in late 1993.

Ford also says it is "definitely in the EV business for 1996" and next year is to start building a fleet of 100 electric vans to gain manufacturing experience.

Perhaps the most advanced EV project in terms of meeting the legislation's deadlines, however, is being undertaken in the UK at Worthing. It is a car, the LA 301, which is being designed and developed by International Automotive Design (IAD), one of the world's largest vehicle engineering consultancies, on behalf of Clean Air Transport, an Anglo-Swedish group which has won a contract to supply 3,500 such cars, starting next year, under the "Los Angeles Initiative".

operation is expected to move to Los Angeles itself in 1993, with predictions that output of the \$25,000, executive car-sized vehicle – complete with air conditioning – will be produced at the rate of 15,000 a year from the mid-1990s.

Sir John Samuel, the CAT director responsible for the project, says that the LA 301, which is a "hybrid" using a small internal combustion engine to recharge the vehicle's batteries outside of the city centre, will not and cannot be a full replacement for a conventional car.

The thinking is that there are enough wealthy buyers, and three- or four-wheel families, in southern California prepared to buy a "clean" car specifically for around-town use, reverting to a conventional car for inter-city journeys.

Critics of the Californian "EV" drive argue that such vehicles merely move the air pollution problem "upstream", in that if the energy to recharge EV batteries is produced by fossil-fuelled power stations, there is little or no net gain in terms of the production of carbon dioxide, seen as a contributor to global warming, or pollutants such as carbon monoxide and hydrocarbons. However, LA officials claim that the extra power station emissions involved would still leave Los Angeles's air 97 per cent cleaner.

John Griffiths

This announcement appears as a matter of record.

MG's Law:

"Everything that can be recycled will be recycled."



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TYRE TECHNOLOGY

Good ideas slow to take off

IT IS possible that the car of the future will run on tyres colour-matched to the car and produced in a few seconds by an injection-moulding machine. When worn out, such thinking goes, they will simply be fed into a melting pot and the material re-injected to form another tyre, perhaps even at the local tyre dealer.

Such a scenario, was being painted with some enthusiasm in the late 1980s by a few companies excited by the properties of polyurethane compounds, and some bicycle tyres and lightweight industrial tyres of this type already exist.

But for the far more demanding application of car tyres, it remains highly unlikely in the absence of spectacular new advances in both materials and moulding techniques, according to senior tyre industry research and development executives.

"Obviously, we're staying up-to-date with what's going on in that area," says Mr Barry Allbert, technical director at Pirelli UK. "But we're doing it via subcontracts with third parties. We certainly haven't seen anything yet which makes us want to start a serious development programme."

Mr Allbert's views are shared by all the major tyre companies, the five largest of which - led by Bridgestone of Japan - account for over 80 per cent of the more than 400m car tyres produced annually. From Goodyear's vast technical centre, employing 1,000 R&D personnel at Akron, Ohio, to the intensely secretive laboratories of the Michelin group at Clermont-Ferrand in France, the conviction persists that the future of the tyre lies in further development of existing tyre technologies and processes.

Consumers themselves have shown a marked indifference to innovation. The failure of a succession of "run-flat" tyres, which prevent catastrophic blow-outs in case of puncture, to win wide acceptance has left Dunlop and, more latterly Continental, defeated.

Whether Michelin will have more success with another radical project, its "mousse", only time will tell. The concept

entails replacing the inflated air inside the tyre with a light-weight compound, rendering it puncture-proof. It has already been proved at the highest levels of motor sport. Michelin's problem now, still some way from being resolved, is how to adapt it to volume production at acceptable cost.

Another seemingly good idea, twin tyres at each corner, to allow high-performance cornering without the aquaplaning on wet roads to which single high performance tyres are subject, has failed to catch on. Audi recently shelved one such joint twin-tire development with Goodyear at the latter's Luxembourg technical centre.

The main challenges facing the tyre industry are much more fundamental, if less entertaining to the imagination. Among the biggest is coping with the far greater variety of new models being introduced by car makers. According to Mr Allbert of Pirelli, the range of tyres produced for cars has more than doubled since the early 1970s. With the car mar-

ket continuing to be broken up into more niches at an increasing rate, the only prospect for tyre makers is to produce yet more tyre types in yet greater variety of sizes.

Computerisation and other new technologies are at least making the task more manageable, with tyre makers building ever larger databases of compounds, reinforcements and structures, and how they interrelate.

To some extent, therefore, they can use their databases to computer "model" a new tyre to achieve the desired characteristics, and predict its behaviour without going through - as in the past - a very lengthy prototype development process.

However, such is the complexity of the dynamic behaviour of a car on the road and the stresses involved that the need for physical testing remains.

"Noise, we understand pretty well. But ride and handling are not yet computer-modelled to a satisfactory extent, so the final tuning of the tyre and vehicle combination is still subjec-

tive," says Mr Allbert. Thus probably the final 10 per cent of the performance of a tyre is optimised by skilled drivers on test tracks, in what is acknowledged to be a subjective manner. So intense is the competition between manufacturers that this 10 per cent is definitive - and certainly holds the key to success in the high-performance, low-profile car tyre market, which is the only segment of world tyre sales enjoying significant

growth levels. Outright performance, however, is seen by some leading figures as slipping slightly down the list of priorities, with reduced rolling resistance assuming more importance in the face of pending US federal corporate average fuel economy (CAFE) legislation requiring sharply improved fuel economy from vehicles over the next decade.

The industry's senior R & D figures do not rule out com-



A Goodyear design engineer takes the measure of a concept tyre tread at the company's Akron, Ohio, technical centre

plete the possibility that tyres one day might be developed wholly by computer. But no-one should really believe it, they suggest, until the industry stops using or building test tracks.

Even supercomputers, it is suggested, need to progress beyond their present state to be able to create an adequate model for the dynamic behaviour of tyres under stress.

Perhaps the biggest single headache is the development of flexible automation processes capable of building a wide variety of tyres. Traditionally, tyre manufacturing has been a labour-intensive process, with much of the tyre built up by hand because of the many different materials involved. However, equipment increasingly capable of allowing a manufacturer to build a variety of tyres at one assembly station, using a high degree of automation, is gradually being introduced and promises substantial help to ease the cost pressures under which tyre makers are increasingly being placed by vehicle makers.

Pressure is mounting, too, from governments and the EC Commission in Brussels, for the tyre industry to come up with proposals for improved recycling of old tyres.

The ideal solution to the industry's problems would be a devulcanising process allowing the tyres' original ingredients to be reclaimed.

In its absence - there is little indication that such a process will ever emerge - it is expected that there will be further growth in the number of plants capable of burning tyres in closed furnaces to provide energy for other industrial and commercial plants.

Some other uses are being found, such as tyres ground into granules for road bed filler, and for putting unseen spring into football pitch and tennis court sub-surfaces.

However, these are relatively marginal uses and the European Commission has invited tyre makers to take part in a working group to discuss formation of a much more comprehensive programme for disposing of used tyres.

The issue is of increasing concern to governments. In the UK, for example, a report compiled by management consultants KPMG Peat Marwick McLintock, commissioned by the government, recommends a system of disposal fees as well as "tyres-to-energy" power plants as the best ways of dealing with scrap tyres, tens of millions of which currently occupy landfill sites, gently leaching pollutants into the soil or, even worse, catching fire.

Large-scale tyre dump fires are all but inextinguishable, and have been known to burn for more than a year.

John Griffiths

ALTERNATIVE TRANSMISSIONS

Nearest thing to a breakthrough

the drive to the wheels almost has to be mechanical anyway. Electric car enthusiasts time and again propose vehicles with the drive motors built directly into the wheels, only to have chassis engineers remind them that such major additions to unsprung (the groundwards side of the suspension springs) weight will ruin both ride comfort and vehicle stability.

Yet without this feature, electric and hydrostatic drives become little more than alternative ways of achieving continuous variable gearing. Hydrostatic drives also suffer considerable noise problems.

It seems likely, therefore, that car transmissions will remain mechanical in principle (heavy trucks may eventually be another matter).

The choice which faces the future project engineer is

between a multi-ratio gearbox of some kind and a CVT. The choice is not clear-cut. The CVT offers theoretically perfect matching of engine speed to running condition.

But conventional multi-speed gearboxes come surprisingly close to the ideal curve, especially as the number of ratios is increased.

At the same time, engineers point out that CVTs have yet to match the very high overall efficiency (small power loss) of conventional systems.

Above all, perhaps, the industry's product planners have an annoying way of pointing out to enthusiasts for innovative transmissions that low cost and proven reliability remain high on the real world agenda.

History tells us that Andre Citroen wanted to give his original Traction Avant a

novel form of automatic transmission. Eventually the car emerged, a year later and far enough over budget to break the company, with an ordinary clutch and manual gearbox.

The pragmatists add, equally infuriatingly, that the response of average drivers to the CVTs offered thus far has been lukewarm, to say the least.

It is certainly true that the number of ratios in conventional transmissions is increasing. The 1970s were an era of four-speed manual gearboxes and three-speed automatics. The 1980s saw the widespread adoption of five-speed manual gearboxes and four-speed automatics.

Now, despite some misgivings, we are seeing the appearance of six-speed manual gearboxes in some high performance production cars,

and five-speed automatics are certainly with us.

This multiplication of speeds has its drawbacks, especially where manual gearboxes are concerned.

Some market surveys are said to have identified a resistance even to five-speed gearboxes among non-enthusiast drivers; and six speeds would certainly cause complaints unless some form of assistance can be provided.

The desire to do so combines well with the feeling in some quarters that driving - particularly in crowded town centres - could and should be made easier without recourse to a conventional automatic transmission.

It could be that the nearest thing to a breakthrough which we shall see in car transmissions will be a realisation of a 1930s dream: a system which

duplicates the action of a skilled driver manipulating a manual gearbox.

Inevitably, electronics is the key to such an advance. The systems now being proposed usually feature not one but two clutches, each of them an electronic servo unit.

Electronic clutches are now well developed. Units developed by the French Valeo group have been run with success in a number of high performance competition cars and Valeo says it is close to a first production application.

If smooth clutch control can be combined with accurate shifting of an ordinary two-shaft gearbox, the need to use a much more expensive epicyclic gearbox, which is a feature of today's automatic transmissions, is avoided and the overall cost would be greatly reduced.

Aside from the question of clutches and gearboxes, we are in the midst of an engineering debate about two-wheel-drive versus four wheel drive transmissions.

The development at the centre of this debate is that of the traction control system

(TCS) which in essence is able to sense a wheel beginning to spin through excess power, just as an anti-lock braking system can sense a wheel beginning to lock through excess braking effort.

The two systems, indeed, have much in common and when installed together share the same sensors.

The arrival of TCS has upset the assumption that very powerful cars would need four wheel drive to prevent frequent wheel spins, with its associated problems of stability and control.

Engineers when were looking (often astance) at the weight, complication, bulk and possibly also the extra noise and vibration of four-wheel-drive systems for large and powerful cars have begun to embrace TCs with something like relief.

It now seems likely that four-wheel-drive will in future be confined to those applications where ultimate traction is most needed; to the most powerful roadgoing sports cars and, of course, to off-road vehicles.

Jeff Daniels

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Innovation.

CAR OF THE FUTURE 4

MR Bruce Blythe, Ford of Europe's vice-president in charge of corporate strategy, is clear about the European motor industry's main concern in the 1990s.

"It's balancing the increased demands for environmental clean-up in Europe, which is going to get much, much stronger faster than any of us think, combined with the new Japanese capacity coming into Europe at the same time," he maintains.

The Europeans are only too aware of what happened when North American makers faced similar pressures a decade or more ago. Meeting US safety, emissions and fuel consumption legislation cost Detroit billions of dollars, just as Japan started planning its transplant-building programme across North America.

US makers steadily lost market share to Japanese models, both imported and those assembled in America. Few expect the Americans, now in deep recession, to regain the ground lost during that time.

Now two of those challenges have crossed the Atlantic. Europe has to live with increasing concern on environmental matters as Japan builds up its transplant presence.

Richard Feast considers the prospects for Europe in the coming decade

'Lean' rivals and pollution pressures

At the same time, there is the prospect of Japan exporting more built-up cars to Europe after the end of 1992. Just how many more is still being debated, but the quotas are likely to be considerably more liberal as the decade grows older.

This increased Japanese presence brings another kind of pressure in itself.

The country's carmakers work on the basis of four-year cycles for all their mainstream models - considerably shorter than carmakers in Europe or North America.

At the same time, Japan's well-established "lean" production allows it to build cars in lower volumes and still remain profitable.

Japanese makers are thus capable of producing numerous niche vehicles - and to renew them frequently. So far, the Europeans are still trying to catch up in this respect.

The combination is likely to prove very attractive to European car buyers, though BMW's chairman warns of a danger.

"The more often you change the model, the more you reduce the value of the product the customer has in his hands. With each model change, the old range will lose 20 per cent of its secondhand car price," says Mr Eberhard von Kuenheim.

The other factor working for the Japanese during this time will be the newness of its factories.

Greenfield site factories built in the 1980s, whether Japanese, American or European, are simply more efficient than old-established ones. They are designed around today's automated manufacturing methods and equipped with the best low pollution machinery.

However - at least in western Europe - most of the new factories

are being constructed by Japanese companies.

The European industry's only comfort is the knowledge that democracy in eastern Europe should offer an escape valve. New car demand in eastern Europe is

The only comfort is that eastern Europe should offer an escape valve

expected to grow by up to 7 per cent a year well into the next century, compared with western European growth of 1.5 per cent.

This level of growth is matched nowhere in the world except south-east Asia - where Japanese car makers are investing as heavily as Europe's are in the old eastern bloc. Ford's Mr Blythe says: "When the Japanese came to the US, and the

emission laws came in early in the 1980s, American makers had nowhere to go. Our market has just expanded by about 40 per cent. What a godsend!"

But that is some way in the future. At present, most European car makers are coping with grim market conditions. Almost everywhere but in Germany, new car sales are on the floor.

But while the unification-inspired boom benefits mainly German makers, other European car companies are glad of their German exports since demand elsewhere is so flat. If communism in eastern Europe had not collapsed, the continent's car makers might well have been as badly hit as those in America.

It is against this background that European vehicle makers are facing demands for more environmentally friendly vehicles. They have to meet the industrial and marketing chal-

lenges, though they are aware of a possible consumer backlash against the car, because of the traffic congestion, noise and pollution that it causes.

Even so, and in spite of the present sales slump, there is an underlying public demand for new cars. As the century draws to a close, however, those new cars are going to evolve in a different way.

The serious technical emphasis will be on more user-friendly vehicles, not glamorous 200 mph supercars.

As drivers spend more time in their cars, makers will pay more attention to interior design and creature comforts. They will also spend huge sums to make cars quieter and less polluting. The cars will achieve better fuel consumption and there will be more alternative fuel vehicles.

On-board navigation systems to

help drivers avoid the heaviest traffic will be commonplace. And cars will be designed specifically for ease of recycling when they reach the end of their lives.

But many car executives feel their industry has been singled out for special treatment. For example, Dr Kurt J. Lauk, Audi deputy chairman, says: "Traffic does contribute to pollution, but on a worldwide basis, traffic results only 10 per cent of the total CO₂. So somebody else has to find solutions to the other 90 per cent of the problem."

By and large, it is the German companies such as Audi which are in the vanguard of moves to clean up exhaust emissions and to design cars for recycling. VW, BMW and Mercedes-Benz either have or are planning recycling plants, while Europe's other carmakers are taking a less public stance.

Mr Klaus Toeplitz, Germany's environment minister, has even proposed that carmakers should eventually be obliged to take back their old cars and completely recycle them.

The German industry's size and strength will almost certainly mean their lead will be followed by other members of the European Community.

NEW TECHNOLOGY

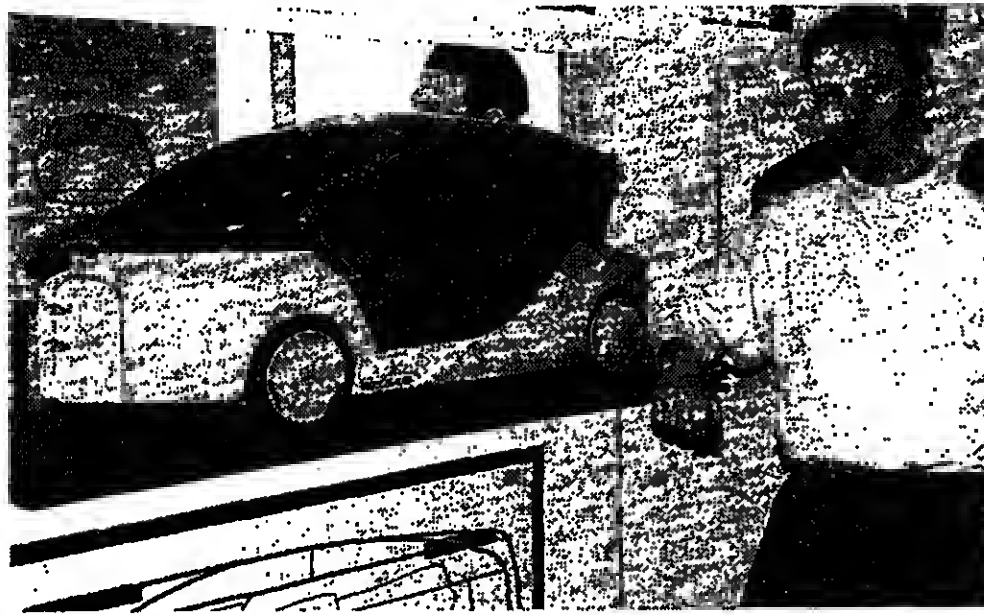
Electronic engine control

EUROPEAN manufacturers, mindful of the ever-rising challenge from the Orient, declare that it is only by technological advances that they can keep ahead of the Japanese.

When one considers how technically adventurous and enterprising the Japanese are, it may not be a case of keeping ahead as of keeping up. However, every one of the major players on the automotive scene internationally is bent on using what comes loosely under the pompous and over-used heading of technology.

By far the greater portion of new engineering features found on the latest production cars are either electronic or have the wonderful versatility of electronic control to thank for their viability. Electronics - mostly digital electronics - has been responsible for most of the greatest advances in contemporary cars in one way or another.

The best example of this comes under another pompous phrase - engine management. Electronic control of both ignition and fuel injection has tamed and civilised very nearly all high performance engines, so that one can potter quietly through town and village even in a Ferrari at low engine speeds without a hint of the spluttering and misfiring that



Jeremy Long, of the Royal College of Art, with his car for the year 2010

would have betrayed that car's ancestors of 20 years back.

The flexibility - the ability of an engine to work smoothly over the widest possible range of engine speeds, from peak power rpm down to nearly idling - of many modern electronically mastered power

units is astonishing. It is all due to adaptive control of both fueling and ignition, with electronic control which can refer to a very detailed memory of settings programmed into it.

In this context, it is good to see some manufacturers at last admitting the existence of high octane (38RON) unleaded petrol, and where adaptive knock sensing is available, programming the system to take full advantage of the more advanced (and therefore more fuel and power-efficient) ignition timing which this fuel permits, as well as adjusting the ignition to cut lower octane fuel when it is used.

The new Mercedes S-class uses electronic engine control fully. One most interesting instance is in harnessing the fueling of the engine to provide a much faster catalytic converter warm-up from cold. Such converters do not begin to perform their job of lowering hydrocarbons, carbon monoxide and oxides of nitrogen until they have warmed up to around 400 deg C, which usually takes about 1½ minutes from a cold start.

To cut this delay, the control unit briefly enriches the fuel/air mixture fed to the engine and at the same time causes air to be injected in the exhaust port, so that unburnt fuel in the exhaust ignites, raising the temperature in the catalyst to operating levels in half the usual time.

Variable valve timing first appeared on a production car with an Alfa Romeo engine, using purely hydraulic control. All the new S-class Mercedes petrol engines use electro-hydraulic control of the inlet camshaft to provide three settings of valve timing overlap, which avoids the compromise

inevitable with a conventionally fixed valve timing, allowing more nearly optimum tuning for a good steady idling, good mid-range power, and maximum power.

In the diesel field, Volkswagen has just announced a second "Umwelt" (environmental) diesel, this time for the Passat. As with the VW Golf Umwelt diesel, a light-blowing turbo-charger provides excess air at all power levels, so that full power can be obtained without generating black smoke.

Exhaust gas recirculation plus a simple oxidation catalytic converter are fitted. As well as reducing carbon dioxide, hydrocarbons and oxides of nitrogen, the catalyst also removes hydrocarbons attached to soot particles, reduces particle emission and - remarkably - by also reducing polycyclic aromatic hydrocarbon compounds, reduces the worst components of diesel exhaust's notorious smell.

"Normal" exhaust gas emissions are kept below the strictest American limits, while the proposed German particle emission limit of 0.05 gram per kilometre is comfortably met.

In the transmission field, a little noted advance may well alter the way we change gear, and more importantly could develop into a more fuel-efficient automatic gearbox. Britain's Automotive Products some years back demonstrated an automatic clutch transmission system, with which one changed gear on a standard manual gearbox car simply by moving the gear lever.

There was no clutch pedal, its action being taken over under electro-hydraulic control, and although the throttle pedal remained, throttle action during gear changes was taken over electronically. It worked very well, and is due to appear on an unnamed light van soon.

Valco, the French rival to AP, has a similar system as do Fichtel and Sachs in Germany, and Kongsberg Automotive, a Scandinavian company, except that Valco, having successfully tested on a rally Lancia Delta Integrales, has beaten the rest to the first car fitment, as an option on the Ferrari Mondial.

With further electronic control and via some added hydraulic or electric servos, a fully automatic version of a conventional spur gear manual gearbox is feasible, giving very high efficiency by eliminating the losses of a conventional automatic's torque converter.

Multiplex wiring has already been fitted first to the Cadillac Allante, but Bosch of Stuttgart has a complete system of its own. A version of it is fitted to both the BMW 850i and the new S-class Mercedes. Basically, multiplex offers a mildly complicated, less expensive way of simplifying vehicle wiring. This becomes significant in luxury cars, where up to 2 km of cable may be used in one car's wiring loom.

Normal wiring involves wires between fuse, power source, the individual electric load (window motor, lamp, door lock, mirror, rear window heater and so on) relay and the driver's control switch. Multiplex by the vast and increasing number of loads in today's better equipped cars, and you have an electrical nightmare.

Multiplex in principle uses a single power supply cable, analogous to the ring main of domestic wiring, feeding all loads, and usually another ring of much lighter control cable, with short radial cables off to a miniaturised solid state "receiver" and switch on each load.

In charge of the control ring is the master processor, which when a driver-selected command is received, sends a coded signal round the ring which will actuate only the appropriate receiver switch. The same set-up can be used to keep the control unit informed of the status and condition of each load, warning of any failure.

One of the few purely mechanical advances, for some time proposed but now in production for Mercedes and BMW, is double glazing of side windows. In the new S-class, two 3mm thick panes are separated by a 3mm gap of sealed dry air, giving a claimed 36 per cent reduction in heat loss and largely eliminating side window misting. Noise transmission from outside is said to be reduced by 50 per cent.

Michael Scarlett

Jeff Daniels investigates tomorrow's materials

Ideal sensor sought

IF THERE is an area of vehicle technology which might be said not to have fulfilled the promise it held a few years ago, it is that of advanced materials. To a very large extent, today's cars are built of the same materials which have been employed for many years.

Major parts of engines are still made from that remarkable material, cast iron; transmission casings are more often cast from aluminium alloy to save weight. Suspension components are usually either fabricated from steel or cast in aluminium; so are the wheels themselves. In the area of seating we have even seen a retreat to traditional methods of construction (as in the Mercedes S-class), as people have come to regard polyurethane foam as a material which is difficult to recycle and which generates CFCs during its manufacture.

The reasons for this apparent conservatism are clear. Cost and reliability loom large in the mind of every corporate product planner, especially if he is defining a car to be built in its millions. Changing to a completely new material can mean that the already huge cost of retooling to produce a major component must be multiplied several times to cover the replacement of the machines themselves. A further disincentive to change has been added of late by the huge public interest in recycling, in which metals have the advantage over plastics and composite materials generally.

Even so, pressures remain which cause engineers to look at new materials for a wide range of applications. It is still highly desirable to save weight, improve comfort and refinement; these are both areas in which new materials hold some promise. It is also true that some new materials can afford major savings in manufacturing cost. This, for instance, is the driving force behind the seemingly ill-fated interest in the plastic engine.

Plastics are still, probably, the new materials attracting most attention from the motor industry, although ceramics run them close. One aspect of plastics which is not widely appreciated is the sheer range of materials and characteristics lumped together within that catch-all classification. It is the wider understanding of plastics that they all look much the same, and thanks to chemical industry nomenclature, even sound the same to the lay ear, it is only when alternative trade names, such

as nylon or Perspex, catch on that the differences are better appreciated. Yet, recent years have seen many new materials being offered, many of them highly capable "engineering plastics".

The engineering plastics materials, such as polysulphone and PEEK (poly-ether-ether-ketane) are capable of replacing metals in demanding applications where loads and temperatures are relatively high. They cost more than steel or aluminium, but in the right application they save both weight and manufacturing cost, since they can be moulded accurately to shape rather than fabricated, and need virtually no finishing.

They tend also to be less demanding so far as lubrication is concerned. Such plastics

Lean burn catalysts are still being tested, but none will last 50,000 miles

are already replacing metals for components, such as roller-bearing cages.

The appearance of the engineering plastics has encouraged designers to take seriously the concept of the plastic engine. No engine can be all plastic; metal or ceramic material will always be needed (so far as one can tell at the moment) to contain the temperatures of the combustion chamber.

Increasingly, however, people are looking at the idea of the combustion chamber and some other high stressed areas, such as main bearings becoming inserts in a mainly plastic structure. The object is again to take advantage of the savings in weight and manufacturing cost which plastic has to offer. Ford of Europe has already demonstrated an engine which goes a long way in this direction: one of the reasons it was chosen for testing is that it is made of materials which are nowhere near as good at noise attenuation as cast iron. The engineer's problems are, as always, diverse.

If plastics still attract attention, interest in ceramics has waned. After a first flush of interest in the form of an electrical signal, materials already exist which change their electrical characteristics according to load, temperature and other factors; the hunt is on to widen the choice and their range of application. In the final analysis, this could be the most important area of new materials research for the motor industry.

work perfectly, so where is the need for further development? Even so, work continues on ceramics, above all in Japan. As a family of materials, its most critical applications today are in exhaust system catalysts in which porous ceramic forms the substrate upon which the actual catalyst is deposited.

One of the holy grails of current materials research is a substrate which combines temperature resistance with mechanical strength to withstand the higher exhaust temperatures of a "lean burn" engine, which would permit big savings in fuel consumption. Most of the industry's major laboratories have been burning catalysts on test, but nobody yet claims to have made one which will last anything like the 50,000 miles demanded by legislation.

Ceramics can also be used in composite materials. While most people think of composites as plastic reinforced by glass or fabric fibres, it is also possible to use ceramic fibres to reinforce metals. This can lead to notable weight savings.

Probably the best example to date is the metal ceramic composite connecting rods which have been tested in Japanese engines with apparent success. Cost remains a barrier, but such components could become critically important if, as some engineers foresee, the main path of engine development is one of ever-higher specific output - squeezing adequate power out of smaller and lighter engines which will, in consequence, be very highly stressed internally.

Yet another area of development in its earlier phases is that of "intelligent" materials. It is now clear that electronic control systems used in the cars of today and tomorrow are critically dependent on the quality and integrity of the information they receive from their sensors. Consequently, there is huge interest in new types of sensor which involve no moving parts and which are highly resistant to vibration, temperature and corrosion.

The ideal sensor, in the eyes of the development engineer, is one that simply sits and relays information on the parameter in question in the form of an electrical signal. Materials already exist which change their electrical characteristics according to load, temperature and other factors; the hunt is on to widen the choice and their range of application. In the final analysis, this could be the most important area of new materials research for the motor industry.

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Supporting advances in the motor industry

ALTERNATIVE FUELS

Bush backs methanol

UNTIL QUITE recently, most industry experts looked for two things in their ideal fuel for the future. In the long term, it should extend by one means or another the finite reserves of our fossil fuels.

This implies the study of energy sources which may be alternatives to oil, such as electricity, gas, bio-fuels, methanol and hydrogen. In the short term, any such fuel should help as far as possible to minimise noxious exhaust emissions from internal combustion engines - carbon monoxide, unburnt hydrocarbons and oxides of nitrogen.

To those concerns have now been added a third. While scientists seek to discover if the "greenhouse" effect resulting from atmospheric carbon dioxide build-up really exists, their deliberations have been overtaken by public and political opinion.

We would be foolish, the popular argument runs, to wait for proof positive. Far safer to do something about it now

than to wait 10 years, before discovering that we should have acted then. Thus, concern over carbon dioxide emissions has already joined the concern over "conventional" emissions, and it is becoming relatively more important in the debate over future fuels.

The problem is that there are only two elements which are both abundant and which burn readily and controllably: hydrogen and carbon. Today's hydrocarbon fuels are a mixture of both, in a ratio of about 85 of carbon to 15 of hydrogen, by weight. For anyone concerned with the greenhouse effect, therefore, an ideal fuel of the future would contain less carbon and more hydrogen.

Such fuels do exist. They are the subject of intense current research and indeed of legislation in the US. By far the most promising of such fuels are the alcohols, ethanol (vegetable-derived ethyl alcohol) and methanol (mineral-derived methyl alcohol, most celebrated in the

lay mind as the alcohol which causes blindness).

The appeal of the alcohols is that, while conventional hydrocarbon fuels contain almost six times as much carbon as hydrogen, ethanol contains only four times as much, and methanol a little over three times as much.

This has been enough to encourage the Americans to greet alcohol fuel, and especially methanol, as a great step forward and write legislation encouraging its use into the statute book. President Bush has lent the methanol programme public support.

The world's major car manufacturers have prepared test fleets of "flexible fuel vehicles" able to run on any mixture of petrol or methanol. Yet at the same time, senior engineers in European and Japanese companies have begun increasingly to voice doubts about the wisdom of the methanol programme.

Jeff Daniels

MGA

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In the late 20th century, the Earth is forcing stark choices upon its human tenants.

Now, the same ingenuity we've shown down the centuries in exploiting the Earth's bounty, must be used to conserve it. Working in closer harmony with the ecosystem is a priority because the Earth, we now fully appreciate, has no replacement parts – nor was it issued with any guarantee.

NO ROOM FOR COMPLACENCY

In the 1990s, the motor industry, perhaps more than any other, is the focus of conservation anxieties. This is a challenge that Mercedes-Benz acknowledge and which they have already long been addressing. And today there is no facet of vehicle design, production, or use that is not rigorously analysed by Mercedes-Benz

Three-way catalytic converter
washes the most toxic emissions from
the exhaust gases.

as they search out and adopt more environmentally benign practices.

Because industrial processes can be a source of undesirable emissions, it is an area in which no industrial concern can feel complacent. Mercedes-Benz, therefore, are just as much in the vanguard of those detoxifying manufacturing procedures as they are in cleaning up vehicle exhausts.

CONSERVING BY RECYCLING

At Mercedes-Benz, the recycling process begins on the drawing board. Every ounce of steel, aluminium, lead and plastic that can be retrieved from a scrapped car, is an ounce that does not have to be fresh-minted from finite natural sources. Today, nearly 75% of a Mercedes-Benz is recyclable and the proportion is rising because the 'final servicing' of a car – the easy recycling of its components – is now part of the original design brief.

Enormous effort is also being put into lowering harmful factory emissions generally. For instance, the output of nitrogen oxides by the power plant at Sindelfingen, the biggest Mercedes-Benz factory, is, today, just 10% of what it was in 1980. Sulphur dioxide emissions are down to 8%.

WATER-BASED PAINTS ARE BEING PERFECTED

In the early '70s water-based dip priming was introduced in all production. This will



Priming and paint finish of new SL sports car is water-based. A world first.

soon be followed by a wholly water-based paint process (including metallic finishes) that is already in operation on the SL sports car assembly line in Bremen.

These new paint processes release minimal solvent fumes into the atmosphere.

There are no replacement parts

The underbody protection applied to all Mercedes cars is already completely solvent free. And Mercedes-Benz were the first car makers to reject the environmentally damaging use of paint pigments based on toxic heavy metal compounds.

Today, in other parts of their plants, only refillable spray cans are used, so CFC use, too, has been minimised.

The quantity of fresh water needed to produce each car has been reduced more than five-fold, which means that Mercedes-Benz factories have drastically cut their outflow of waste water. The longer-term plan is to eliminate polluted waste water altogether.

Meanwhile, biochemists are working on a process they believe will allow solvent-polluted water to be cleansed naturally through bacterial action.

BREEDING BIRDS ADOPT FACTORY ENVIRONS

As the outflow of emissions from Mercedes-Benz factories grows ever less harmful, there have been rewarding side-effects. For example, trees near the Unterturkheim factory, always a haven for bird-life, are even more heavily populated these days, as several species adopt the area to breed. Now the factory has installed 600 nesting boxes to help things along.



Mercedes-Benz clean-air practices encourage bird life in vicinity of Unterturkheim plant.

As early as 1972, each plant engaged its own environment officer, and the appointment of the senior co-ordinator of the company's environmental strategy is important enough to be a Board-level decision. And, since 1987, specialist employees have been trained as waste management and disposal officers.

INVESTING IN ENVIRONMENTAL PROTECTION

Mercedes-Benz embrace with determination their commitment to help reverse present threats to the environment. A further example of this commitment is the fact that a third of the research and development budget for commercial vehicles is invested in environmental protection. Yet another is the cultivation of walnut trees to provide a constant supply of burl walnut inlays for Mercedes car interiors. By farming their own trees, Mercedes have no need to deplete naturally occurring walnut stocks.



By farming walnut trees for saloon-car wood inlays, natural walnut stocks are preserved.



ENGINEERED LIKE NO OTHER CAR
IN THE WORLD

Today, the proper protection of the environment is everyone's business. But Mercedes-Benz also accept that they have a special responsibility for road transport's rapid development, because no one was earlier on the scene than they, in the 1880s. And, in the 1990s, no one can draw on such a vast store of experience.

CAR OF THE FUTURE 6

THE INDEPENDENT design and engineering consultancies play a far larger role in the motor industry than is generally realised. Indeed, without them, the car-producing industries of Europe and the United States would quickly run out of new models.

A quick glance along any high street will give some indication of the important contribution the consultancies play in producing the cars we drive today. Examples of their handiwork are everywhere.

●The Fiat Tipo - designed by IDEA of Turin.

●The Volkswagen Golf convertible - engineered and manufactured by Karmann of Osnabrück.

●The Seat Ibiza - with its engine designed by Porsche of Stuttgart.

●The Volvo 440 - a car engineered, tested and manufactured in association with International Automotive Design (IAD) of Worthing.

And these are only examples for which there is an acknowledged input by the consultancies, which are notoriously secretive about their client lists.

With the possible exception of Japanese models, almost every vehicle on the road today contains some element of the consultancies' skills.

It is a business that is likely to grow, even if, like all other aspects of society, consultancy work is suffering the effects of the economic slump.

The responsibilities are becoming larger and larger," reports Mr John Shute, chair-

man and founder of IAD.

More and more assemblers are postponing all but their most vital projects. At the moment, consultants are living a more hand-to-mouth existence on smaller three- or four-month projects. They are anxiously awaiting the economic upturn which will give assemblers the courage to sign off on the big projects.

They know the multi-million pound turnkey projects will have to come if the car makers are to remain competitive in the middle and late 1990s. There is certainly no let-up in competitive pressure from the Japanese, who tend to retain much more of the design and development functions in-house.

The consultants also take heart from two trends towards more niche vehicles and shorter product cycles. Once again, much of the impetus behind these stems from Japan.

Their car makers are geared to four-year model replacements, compared with the six years at least which have been normal in Europe and North America.

In addition, lower volume niche products such as convertibles, coupes, sports cars, people-carriers and sports-utili-

ties, are becoming increasingly popular, as customers demand vehicles that are different from the mainstream.

All these extra models have to be designed, tested and prepared for production. And with the assemblers becoming increasingly lean in their operations, much of the work will be contracted out to private consultancies.

Apart from the simple expedient of getting the job done, the other main reason for turn-

ing to consultants is not difficult to understand. The consultants reckon they can do a given job for a lot less money.

"It varies, but we believe we can do it for nearly half the price," says Mr Ian Everard, sales and marketing director of Canewdon, one of Britain's medium-size engineering companies.

The trend is for assemblers to reduce product development overheads - manpower - in order to concentrate on the core business of manufacturing.

An engineer made redundant by a carmaker may join a consultancy only to find himself working on the same project which has been sub-contracted to his new employer

Neither is it unknown for an engineer made redundant by a carmaker to join a consultancy only to find himself working on the same project which has been sub-contracted to his new employer.

The heads of Britain's biggest two consultancies started their careers with big assemblers.

Mr Shute began IAD after Vauxhall wound down its engineering centre in England. Today, IAD has a turnover in

excess of £60m, and employs 1,450 people worldwide.

Mr John Whitcross, chairman and chief executive of Hawtal Whiting, began with Briggs Motor Bodies and Ford. Today, his company has a turnover of almost £60m and employs 1,140 people in Britain and North America.

The consultants' specialities vary, but they span the whole gamut of carmaking, from design to legal compliance by way of model making, panel beating, testing and tool design.

ibles and Corrado coupes. Porsche in Germany has long undertaken contract engineering for bigger companies. It can be lucrative work which frequently earns as much money for the company as selling its own cars.

Porsche's clients range from Mercedes-Benz, for which it assembles certain "sporty" saloons, to Lada, for which it helped engineer the Samara hatchback.

It was also the inspiration for Britain's Group Lotus to start offering its engineering know-how to the volume car makers. Now that Lotus is owned by General Motors, many of its clients are GM divisions, though it has worked for Volvo and Chrysler among others.

More recently, motorcycle maker Yamaha was commissioned by Ford of Europe to design and develop a small four-cylinder engine. Yamaha is known to have previously worked for Ford in North America and Toyota in Japan.

But the public will never know to what extent the consultants have been busy because of the extreme secrecy throughout the whole business.

A large consultant may be working for more than one assembler at a time, and it is vital to maintain the rivals' secrets.

There is also the fact that most assemblers like to claim their new vehicles as entirely their own. And as the client is picking up the bills, the consultant has to remain silent.



Cosworth's MBA engine complies with Clean Air Act rules

Michael Scarlett on accidents

UK leads in road safety

ITS ENEMIES are fond of saying how dangerous the car is. Yet, if one takes into account the number of vehicles on the roads and the distance they cover in a year, it is remarkable that there are not many more serious accidents than statistics record.

German research, which measured the millions of vehicle kilometres travelled for every single traffic fatality between 1970 and 1987, showed safety rising in most of the developed world, with the UK the safest of all by 1987 at 175m vehicle km per traffic death, narrowly ahead of West Germany (160m), the US (150m), and with France (93m), Austria and Italy (50m) trailing.

Traffic legislators bent on telling Germany that it must step into line and abandon its lone adherence to no overall maximum speed limit on motorways, rather than the UK's 70 mph limit and the even lower speed restrictions in the US, may have to think again.

Since there are more than 100m miles between fatalities in Britain - even 31m vehicle miles in Austria and Italy - few of us ever see a fatal accident on the motorway. Nevertheless, it is fashionable to see the motor industry as laggards in making cars safer.

There are two sorts of car safety. Passive safety is the more recent discipline, where the designer does his best to protect car occupants from injury in a collision. Active safety is the ability of a well-designed car to give the driver to avoid a collision - through good brakes, good tyres, good performance, good roadholding and nimble, safe handling.

For most manufacturers - with some distinguished exceptions such as Mercedes-Benz in Germany, Volvo in Sweden and, to some extent, the old Rover company in Britain - in the drive towards higher passive safety it has been a case of legislators, especially in the US, leading the industry.

However, legislation has traditionally set only low minimum standards for active safety. Such cars as the Triumph Herald, the Volkswagen Beetle and most early BMWs and Porsches might never have been permitted off the production line if standards then had been as high as today's.

Many companies now exceed legislative requirements on safety. Usually, in the 30mph barrier impact test, the amount by which the steering column can be forced rearwards - not more than four inches under US safety rules - has been comfortably undercut.

And the industry's safety research has shown how existing safety tests may be inadequate and how to improve them. One example arose in the classic barrier crash test, in which a car is propelled at 30mph into a virtually solid 200-ton wall. This test has been at the core of most passive safety legislation since at least the US Motor Vehicle Safety Act of 1966.

Research into real-life collisions showed that the majority of serious cases occurred not when cars crashed squarely into one another or into solid objects, but where the contact was at an angle or only over part of the car's front.

A car developed to crash into a wall at right angles with maximum absorption of the deceleration forces, and mini-

mum injury to occupants, might well not perform nearly so safely when hitting the same wall at 30 degrees off the right angle.

Worldwide, national safety standards vary quite widely, with the US still generally the most demanding (though when it comes to seatbelt wearing, the US is still behind Europe).

Impact absorption by the front of the car, together with the surviving non-deforming passenger cell, is now well enough understood for computer-aided design and the results of impact simulation on a computer screen to make a lot of testing unnecessary.

The first new engine whose design - and unusual cylinder arrangement - were partly influenced by crash absorption considerations was launched last November.

Side collision is far harder to deal with

The Volkswagen-Audi group's 2.8-litre vee-six-cylinder is conventionally arranged with two banks of three cylinders set at 90 degrees, for the longways engineered new Audi 100 Vee-six engines are wide, but short lengthwise, leaving plenty of nose structure for impact absorption when they are installed lengthwise.

Three months later, VW revealed the long-rumoured similar capacity vee-six engine for the Passat, and later, for a top-end version of the new Golf due this autumn. A major reason for the 15-degree vee disposition of its cylinders is that overall engine width is much less than on a 90-degree vee, allowing a maximum of crash-absorption length in the nose of the cross-wise engine layout used in all Volkswagens.

In spite of mistrust by the public, the air bag which inflates from a pocket in the steering wheel hub - and nowadays out of the fascia in front of the front passenger on sensing the start of collision deceleration - is becoming more widely accepted as well as legally required.

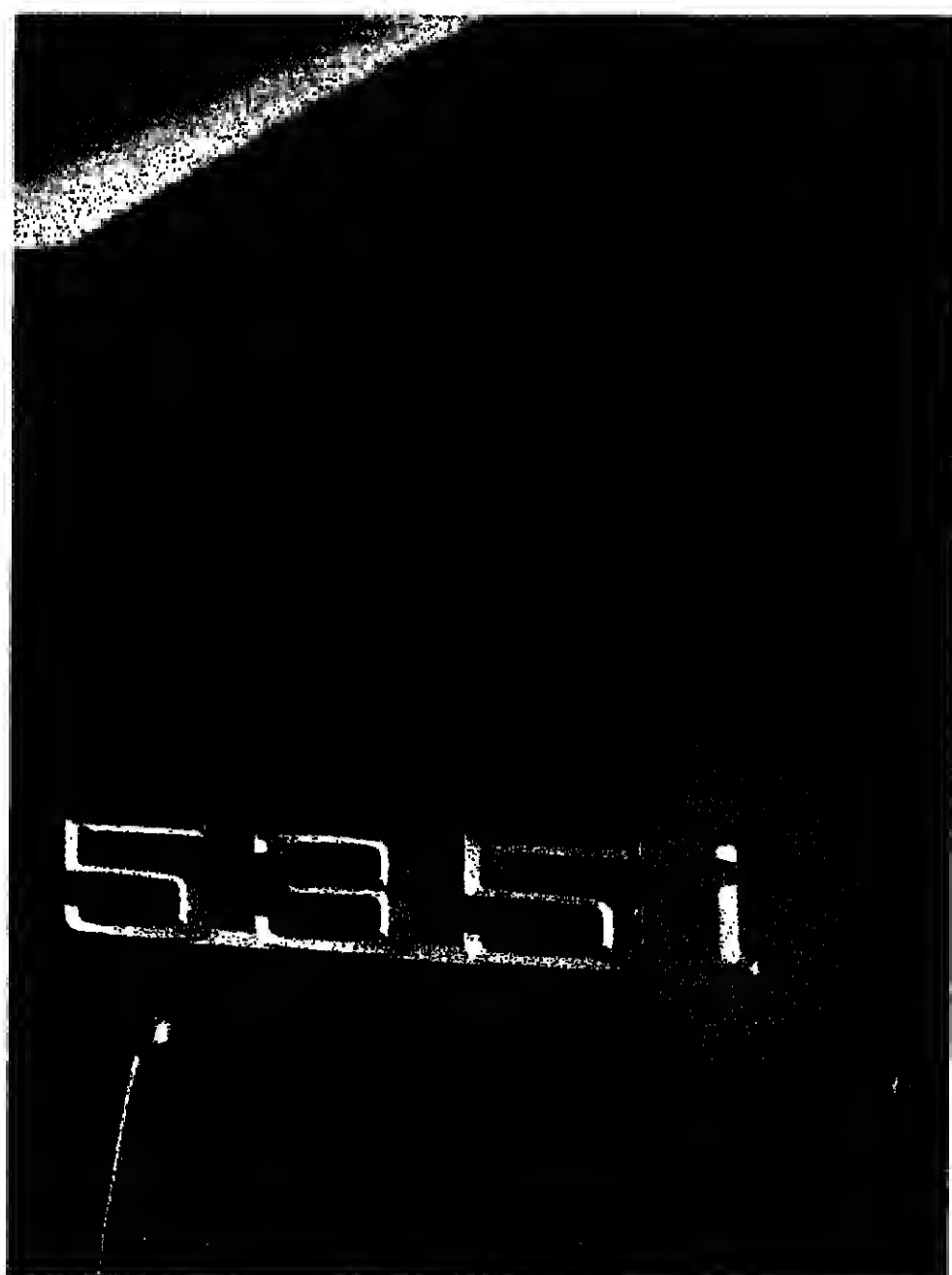
There are now calls for similar impact absorption to cater for side impact, a frequent form of collision. Side-swing protection has previously been confined to reducing intrusion into the passenger box with reinforcements in doors.

Side collision is far harder to deal with, because in contrast to front collision, there is in an average family car one-sixth as much length between the outside and the nearest occupant and a far smaller thickness of structure in which to absorb impact. For this reason, some researchers are working on applying the air bag to the side of the cabin as well as the front.

Besides improving car occupant protection, a lot could be done to reduce the chances of collisions by better management of traffic - which becomes daily more important as its volume increases. Some 14 European motor manufacturers and related companies - including Britain's Jaguar, Lucas and Pilkington - have collaborated since 1987 on a remarkable if underpublicised research programme to establish safer traffic systems.

All of which will help in the future - but sadly not nearly as much as higher standards of driving.

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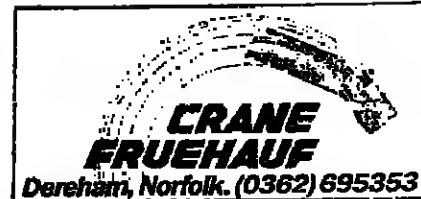
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FINANCIAL TIMES COMPANIES & MARKETS

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Tuesday May 21 1991



INSIDE

Sedgwick steady in first three months

Sedgwick, the international insurance group which last year carried out a major cost-cutting programme, yesterday announced static pre-tax profits for the first quarter. Pre-tax profits in the three months to end-March came out at £42.6m (£72.5m) against £42.5m last time. Sedgwick had reported sharply reduced full year profits of £39.3m that included £21m of exceptional charges for redundancies and closures, especially in the US. Page 28.

Chilean gold mine leaves them all breathless

A prospective visitor to the Chocomaque gold mine in the Chilean Andes will first have to undergo a strict medical, testing blood pressure and pulse rates. Chocomaque is the world's highest commercial mine, at 4,825 meters, and sits at 4.6m tonnes of gold-bearing rock a year. But one in every three visitors suffers altitude sickness which causes headaches, nausea and, sometimes, vomiting. Kenneth Gooding reports on how the operators cope with working at these difficult altitudes. Page 30.

Polly Peck's silver lining

Veetel has risen above the dark cloud hanging over Polly Peck International. PPI's Turkish consumer electronics subsidiary posted profits by almost four times in 1990. Veetel's success provides an object lesson for its rivals — how a foreign investor new to the field can shake up a well-established industry. John Murray Brown reports on one of PPI's more resilient subsidiaries. Page 28.

First fall for JVC in four years

JVC, the Japanese consumer electronics company, yesterday reported its first pre-tax profit fall in four years. The company's 1990 pre-tax profits for the year to March 1991 were £28.3m (£190m). It attributed the fall to increased price competition, and higher spending in research and development and advertising. Page 20.

Bond swap moves a step nearer

Alan Bond, former chairman of the Bond Corporation, will hold 6 per cent less of the company's shares if a proposed debt-for-equity swap approved yesterday by shareholders in Perth is carried out. Peter Lucas, who replaced Mr Bond as chairman last year, said Mr Bond voted in favour of the reconstruction. The vote follows approval by bond holders in Geneva on Thursday, and clears the way for a vote by other European bond holders within the next fortnight. Kevin Brown reports. Page 20.

Barlow Rand falls 14%

Barlow Rand, South Africa's largest industrial group, yesterday announced a 14 per cent profit decline in the six months to March as Middelburg Steel, a big subsidiary, suffered a loss. Turnover rose 12 per cent to R15.5bn (£5.5bn), but pressure on margins saw operating profit 1 per cent lower at R1.2bn. Page 22.

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Chief price changes yesterday

| NEW YORK (2) | TOKYO (Yen) |
|--------------|----------------|
| Aluminium | 193.5 + 2.5 |
| Copper | 86.5 + 1.5 |
| Gold | 380.0 + 1.0 |
| Oil | 40.0 + 1.0 |
| Platinum | 1,100.0 + 10.0 |
| Silver | 160.0 + 1.0 |
| Steel | 1,100.0 + 10.0 |
| Wheat | 120.0 + 1.0 |
| Yen | 160.0 + 1.0 |

New York prices at 12.30pm, Paris and Frankfurt closed.

| LONDON (Pence) | ASIAN (Rupees) |
|----------------|----------------|
| Brent Walker | 32 + 3 |
| Biff Talcott | 100 + 10 |
| Devenish | 30 + 3 |
| Harwa | 30 + 3 |
| Interpro | 30 + 3 |
| Midland | 30 + 3 |
| Mitsubishi | 30 + 3 |
| Mitsui | 30 + 3 |
| Onora | 30 + 3 |
| Polly Peck | 30 + 3 |
| Proving | 30 + 3 |
| Rothmans | 30 + 3 |
| Sankt Ann | 30 + 3 |
| Sedgwick | 30 + 3 |
| Sunshine | 30 + 3 |
| Systems | 30 + 3 |
| Tharrie | 30 + 3 |
| Thorn EMI | 30 + 3 |
| "Toys 'R' Us" | 30 + 3 |
| Youghal | 30 + 3 |

Montedison rises 13% in first quarter

By Haig Simonian in Milan

MONTEDISON, the Italian chemicals, energy and agro-industrial concern controlled by the Ferruzzi group, said yesterday that it had recorded a 13 per cent rise in operating profits for the first quarter of 1991.

The group also revealed consolidated after-tax profits, net of minority interests, of L565bn (£437m) for 1990. Sales were little changed at L14,735bn against L14,775bn in 1989.

Comparison with 1989 earnings is virtually impossible, due to the merger announced last July between Montedison and Feruzzi Agricola Finanziaria, Ferruzzi's agro-industrial subsidiary. Matters are further complicated by

KNICHEM, the Italian chemicals group previously known as Enimont, plunged into the red last year with a loss of L85bn (£68.45m), after a profit of L716bn in 1989, writes Haig Simonian in Milan.

Before minority interests, the loss amounted to L68bn, against net earnings of L740bn in 1989.

The group, controlled since last November by Italy's state-owned Eni chemicals and energy concern, blamed its loss on the

depression in the world chemicals industry.

The company is restructuring involving job losses, disposals and joint ventures. EniChem said earnings had been hit partly by lower demand and decreased margins for many of its products.

Exchange rates and a sharp rise in costs in the second half also affected earnings. Group sales fell by 1.9 per cent from L15,347bn in 1989 to L15,060bn, with the

sale last November of Montedison's 40 per cent stake in the Enimont chemicals joint venture to Eni, the state-owned group.

However, the sale brought Montedison a welcome liquidity, reducing group debt from

L6,755bn at end-December 1989 to L5,815bn at the end of last year.

The divestment has also rid the group of a troublesome built chemicals business just as it was slipping into loss, and more than compensated for the expense

incurred in buying out the minority interests in Montedison's Enimont subsidiary in the US.

In 1989, Montedison's group net profits were already confusing. Although group net earnings amounted to L1,156bn, if extraor-

inary gains stemming from Enimont-related revaluations were deleted, then profits actually fell by 20 per cent on the 1988 figure to L922bn.

Gross operating profits dropped from L1,820bn in 1989 to L1,581bn last year. The figures include L618bn in net operating profits and L1,013bn in depreciation, against L530bn and L630bn respectively in 1988.

The company, which is maintaining its dividend at L50 for each ordinary share and L50 for savings shares, attributed the sharp earnings fall to the downturn in the chemicals industry.

The polymers business was particularly difficult. Lower raw material costs did not compensate for the fall in finished product prices. Earnings were also affected by exchange rate factors and dry weather in Europe, which boosted raw material prices on the agro-industrial side.

Tottenham shares Gascoigne's pain

The injury to Britain's best-known footballer has jeopardised his club's financial hopes. Jane Fuller reports

When Paul "Gazza" Gascoigne crumpled to the ground during Saturday's FA Cup Final, Tottenham Hotspur's financial hopes crumpled with him.

The London football club, one of the UK's big five, had counted on selling Gascoigne to the Italian club Lazio for £7m-plus, to halve its debts of £13m-£14m. Now that torn ligaments have sidelined him for several months, the deal is in jeopardy and the club must think again.

For its part, Midland Bank, owed £10m-£11m, must decide how much longer to be patient. Since last year, the club has been in breach of its loan agreement and Midland can call the debt in at any time.

Tottenham's predicament is a lesson to the other big UK clubs in how mis-managed diversification and lax control of stadium development can bring even a top-winning club to the brink of bankruptcy.

The lesson is particularly relevant as UK soccer is faced with spending hundreds of millions of pounds to create all-seater stadia as a result of the Taylor report into the Hillsborough disaster.

Midland Bank's decision is not an easy one. Tottenham is paying its total interest bill of £85,000 a week and has reduced bank debt from £12.5m last May. After closing losses-making clothing subsidiaries and cutting costs, the club's 1990-91 operating profit should be better than the £2m earned last year. The victorious FA Cup campaign will have contributed about £500,000.

Tottenham is alone among the big five in having much in the way of borrowings. Arsenal and Manchester United are both launching big fund-raising issues — bonds to secure seats and a stock market flotation respectively — from a debt-free base.

Neither Liverpool nor Everton paid any interest in 1989-90.

But while its rivals are raising money for future development, Tottenham needs the cash to remedy past mistakes. These include cost overruns on the East Stand at White Hart Lane, which eventually absorbed £8.7m, and unsuccessful forays into fashion and sportswear, which lost several hundred thousand pounds last year.

Selling Gascoigne had become more urgent as hopes faded for alternative sources of capital — either a substantial rights issue or the takeover of the club by a consortium backing Mr Terry Venables, the team manager. Mr Venables' future with the club is now in doubt because of his challenge to the board and the expiry



1982-83: IRVING SCHOLAR AND PAUL BOBROFF CONTROL OF TOTTENHAM, THEN FLOAT IT ON STOCK EXCHANGE.

1987: ENTER TERRY VENABLES AS TEAM MANAGER.

1988: PAUL GASCOIGNE BOUGHT FOR £2m FROM NEWCASTLE UTD.

1989-90: BANK DEBT MOUNTS TO £12.5m AS COST OF NEW STAND DOUBLES. IRVING SCHOLAR'S UNSUCCESSFUL ATTEMPT TO NEGOTIATE £13m RIGHTS ISSUE.

of his contract this summer.

Without a fresh capital injection, Tottenham cannot hope to regain its stock market listing, suspended in October with the shares at 9p.

Tottenham can, of course, sell players other than Gascoigne. Gary Lineker, the 30-year-old England striker, might fetch the best part of £2m. Paul Stewart, scorer of a crucial goal on Saturday, might be worth more than the £1.5m Tottenham paid for him in 1988. In all, a dozen of the club's 34 professionals have been assigned a book value of £3m including £2m for Gascoigne.

But the sums are small compared with the amount Gascoigne would have raised. Similarly, any rights issue or other capital-raising exercise that Tottenham might conduct now looks smaller

than was hoped for in the past.

Last year, Mr Irving Scholar, club chairman and holder of 26 per cent of the shares, tried to negotiate a secret £13m deal with Mr Robert Maxwell. But it dissolved amid stock exchange disapproval and boardroom acrimony. Mr Scholar left the board, and Mr Paul Bobroff, who came in with him in 1982, resigned from the chairmanship.

The new chairman is Mr Nat Solomon, former head of Pleasura. Since his arrival, the finance company Baltic is understood to have offered to arrange a one-for-one issue at 40p-a-share — but that would have raised less than £4m after expenses.

Mr Venables' efforts to buy into the club have also proved unacceptable. His first tilt, said to be worth £20m-plus, was via a

consortium including the shadowy property dealer Mr Larry Gillick and advised by the struggling finance house Tranwood.

It did not convince the board.

His second effort was far more modest: to spend at most £3.25m on new shares in the club at 60p each to gain a maximum stake of 35 per cent. Although this went down well with the shareholders, who have lost patience with Messrs Scholar and Bobroff, it failed to win enough support among directors and major shareholders, some of whom Mr Venables wanted to force out.

Mr Tony Berry, who joined the board before his Blue Arrow group ran into trouble, is a Venables supporter. But another director says the move is an attempt to control the club on the cheap.

These divisions and the feeling that Mr Solomon, brought out of retirement for the job, is not a long-term chairman, have made the task of attracting new investors all the more difficult.

Other top football clubs hope to avoid similar problems. Manchester United has stressed that it will not diversify away from football. It expects to make a pre-tax profit of about £5m this year on a turnover of about £15m, thanks to success in the European Cup Winners' Cup.

Arsenal has chosen to cash in on its fans' emotional ties, rather than on an appeal to harder-headed investors who would want interest or dividend payments. It is offering seats, reasonable season ticket prices and better facilities to raise £16.5m from 12,150 supporters.

Tottenham says it needs to spend less than its rivals to comply with the Taylor report because of previous investment in new stands. It estimates that £2.5m of new investment plus a £2m grant from the Football Trust will make White Hart Lane all-seater by the deadline of August 1994.

On the revenue side it can look forward to about £2m from European football next season, plus price rises of more than 20 per cent. Attendances might fall, however if it sells stars to pay debts.

Tottenham's problems illustrate how British football must balance its twin needs for investment in new stadia, and in players. The risks and rewards are great. Without new stadia, the clubs cannot meet government requirements. Without strong teams, the clubs cannot take proper advantage of their return to European competition, and of the possible emergence of super-leagues at home and in Europe.

See Lex Page 18

LTV plan to sell defence unit criticised by creditors

By Martin Dickson in New York

LTV, the US steel company, yesterday announced plans to sell its large defence and aerospace business to help it out of bankruptcy proceedings — but it ran into immediate opposition from creditors of the division.

LTV's defence and aerospace company makes missiles, rockets, space systems, military vehicles and sub-assemblies for military and commercial aircraft. It is the 20th largest defence contractor in the US.

The division employs 18,100 people, has sales in 1990 of about \$2bn and its current order backlog is more than \$6bn. However, the business has been barely profitable in recent years, with the aircraft products side making a \$19.3m operating loss last year and missiles and electronics a profit of \$2m.

The division employs 18,100 people, has sales in 1990 of about \$2bn and its current order backlog is more than \$6bn. However, the business has been barely profitable in recent years, with the aircraft products side making a \$19.3m operating loss last year and missiles and electronics a profit of \$2m.

The former boxer said his confidence was based on relatively good trading and the fact that it was "in no one's interests" to put the group into administration. Banks, which have lent over \$1.2bn (£44m) to Brent Walker, would suffer large losses if the company went bankrupt.

Since last November, when an emergency refinancing was agreed with its banks, Brent Walker has only been able to continue trading with their support. Now its creditors have to decide whether to put the group's finances on a firmer footing for the longer term, and how to accomplish that.

LTV has been in Chapter 11 bankruptcy proceedings since 1986 but earlier this month announced a plan to emerge from the protection of the courts, involving payment of large amounts of available money to settle a long-running dispute over the funding of its pension plans.

That package was immediately attacked by the group's unsecured creditors, who would be paid a maximum of only 25 per cent of their claims.

It is selling the defence division to meet a requirement that it pay about \$450m in cash immediately into the pension plans.

LTV said when it unveiled the restructuring plan that this commitment would require it to raise \$300m through asset sales — but that would have raised substantially more than that from

the sale of the defence division.

However, the disposal plan stirred up opposition among creditors holding about \$170m of the aerospace unit's \$300m debt. This group is concerned that the restructuring plan has made little distinction between creditors of the steel side, where most of the pension obligations lie, and its healthier aerospace side.

The creditors said the LTV plan was a "cynical and ill-considered attempt to confiscate value which rightly belonged to them" and there was no business justification for selling the operations now.

Analysts said the company could have difficulty selling the division at a good price: although US commercial aircraft sales are sluggish, there is no sign that defence spending is declining.

Brent Walker to unveil bank plan

By Maggie Urry

MR GEORGE Walker, chief executive of Brent Walker, was confident yesterday that the heavily indebted leisure group's bankers would accept a business plan to ensure its survival. The shares rose 8p to 32p.

The former boxer said his confidence was based on relatively good trading and the fact that it was "in no one's interests" to put the group into administration. Banks, which have lent over \$1.2bn (£44m) to Brent Walker, would suffer large losses if the company went bankrupt.

Since last November, when an emergency refinancing was agreed with its banks, Brent Walker has only been able to continue trading with their support. Now its creditors have to decide whether to put the group's finances on a firmer footing for the longer term, and how to accomplish that.

Looking cheerful and flanked by the senior directors appointed since the group's refinancing, Mr Walker said he could not reveal any details of the plan ahead of presenting it to the banks this afternoon. All he would disclose was that the plan envisaged a reduction in his role at the company. He, with his family, is the company's largest shareholder.

The plan is thought to include proposals to sell assets such as the group's casinos and some of its sports and leisure complexes. Brent Walker wants to keep the William Hill betting shop chain; its brewing and pub business, and leisure developments such as Puerto Sherry in Spain and Brighton Marina on the south coast of England. A proposal to convert some of the group's bank debt into shares is unlikely.

Mr Walker was supported in his optimism by Lord Kinderley, chairman, and Mr Nicholas Ward, group managing director. Mr Ward said that the plan being put to the banks was "realistic, achievable and a sensible way forward for this group".

Their bullishness was despite the announcement of a retained 1990 loss of £265.5m (against a profit of £104.7m), a £499.2m write-down of property values and a £990m fall in shareholders' funds to £150m. Brent Walker did not pay a final dividend for 1990. It warned it would make an overall loss this year and would pass the dividend on its preference shares.

Operating profits rose by 8.2 per cent to £123.2m. Net interest charges of £116.2m (£44.1m), exceptional debts of £28.1m and extraordinary debts of £201.9m did most of the damage to the profit and loss account.

Lex, Page 18

This announcement appears as a matter of record only.

May 1991

LYRIC HOTELS LTD.

\$25,700,000
Management Buy-In

\$11,100,000
Equity

Arranged by



Underwritten by funds advised by

County NatWest Ventures Limited Causeway Capital Limited
Murray Johnstone Limited Hambro European Ventures Limited

\$14,600,000
Senior Debt Facilities

Arranged by

COUNTY NATWEST

Underwritten by

Bank of Scotland County NatWest Limited

Provided by

Bank of Scotland County NatWest Limited

The Hongkong and Shanghai Banking Corporation Limited

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NASDAQ NATIONAL MARKET

3-75 not before May 20

| Company | High | Low | Open | Close | Volume | Change |
|----------|-------|-------|-------|-------|--------|--------|
| ABC Corp | 10.25 | 10.10 | 10.15 | 10.20 | 100 | +0.05 |
| DEF Inc | 15.50 | 15.30 | 15.40 | 15.45 | 200 | +0.05 |
| GHI Ltd | 8.75 | 8.60 | 8.65 | 8.70 | 150 | +0.05 |
| JKL Corp | 22.00 | 21.80 | 21.90 | 22.00 | 300 | +0.10 |
| MNO Inc | 5.10 | 5.00 | 5.05 | 5.10 | 80 | +0.05 |
| PQR Ltd | 18.25 | 18.10 | 18.15 | 18.20 | 120 | +0.05 |
| STU Corp | 12.50 | 12.40 | 12.45 | 12.50 | 90 | +0.05 |
| VWX Inc | 7.80 | 7.70 | 7.75 | 7.80 | 60 | +0.05 |
| YZA Ltd | 25.00 | 24.80 | 24.90 | 25.00 | 400 | +0.10 |
| BCD Corp | 9.50 | 9.40 | 9.45 | 9.50 | 110 | +0.05 |
| EFG Inc | 14.00 | 13.90 | 13.95 | 14.00 | 130 | +0.05 |
| HIJ Ltd | 6.25 | 6.15 | 6.20 | 6.25 | 70 | +0.05 |
| KLM Corp | 20.75 | 20.60 | 20.65 | 20.70 | 250 | +0.05 |
| NOP Inc | 4.50 | 4.40 | 4.45 | 4.50 | 50 | +0.05 |
| QRS Ltd | 16.50 | 16.40 | 16.45 | 16.50 | 140 | +0.05 |
| TUV Corp | 11.00 | 10.90 | 10.95 | 11.00 | 100 | +0.05 |
| WXY Inc | 8.00 | 7.90 | 7.95 | 8.00 | 80 | +0.05 |
| ZAB Ltd | 23.50 | 23.30 | 23.40 | 23.50 | 350 | +0.10 |
| CCD Corp | 10.75 | 10.60 | 10.65 | 10.70 | 120 | +0.05 |
| EEF Inc | 15.00 | 14.90 | 14.95 | 15.00 | 150 | +0.05 |
| GGH Ltd | 7.50 | 7.40 | 7.45 | 7.50 | 90 | +0.05 |
| IIJ Corp | 21.25 | 21.10 | 21.15 | 21.20 | 280 | +0.05 |
| KKL Inc | 5.50 | 5.40 | 5.45 | 5.50 | 70 | +0.05 |
| LLM Ltd | 17.75 | 17.60 | 17.65 | 17.70 | 110 | +0.05 |
| NNP Corp | 12.00 | 11.90 | 11.95 | 12.00 | 100 | +0.05 |
| OOQ Inc | 8.50 | 8.40 | 8.45 | 8.50 | 80 | +0.05 |
| PPR Ltd | 24.00 | 23.80 | 23.90 | 24.00 | 400 | +0.10 |
| QQS Corp | 9.00 | 8.90 | 8.95 | 9.00 | 110 | +0.05 |
| RRT Inc | 14.50 | 14.40 | 14.45 | 14.50 | 130 | +0.05 |
| SSU Ltd | 6.75 | 6.65 | 6.70 | 6.75 | 70 | +0.05 |
| TTV Corp | 20.00 | 19.80 | 19.90 | 20.00 | 250 | +0.05 |
| UUW Inc | 4.75 | 4.65 | 4.70 | 4.75 | 50 | +0.05 |
| VVX Ltd | 16.00 | 15.90 | 15.95 | 16.00 | 140 | +0.05 |
| WWY Corp | 11.50 | 11.40 | 11.45 | 11.50 | 100 | +0.05 |
| XXZ Inc | 8.25 | 8.15 | 8.20 | 8.25 | 80 | +0.05 |
| YYA Ltd | 22.75 | 22.60 | 22.65 | 22.70 | 350 | +0.05 |
| ZZB Corp | 10.25 | 10.10 | 10.15 | 10.20 | 120 | +0.05 |
| AAA Inc | 15.75 | 15.60 | 15.65 | 15.70 | 150 | +0.05 |
| BBB Ltd | 7.00 | 6.90 | 6.95 | 7.00 | 90 | +0.05 |
| CCC Corp | 21.00 | 20.80 | 20.90 | 21.00 | 280 | +0.05 |
| DDD Inc | 5.25 | 5.15 | 5.20 | 5.25 | 70 | +0.05 |
| EEE Ltd | 17.00 | 16.90 | 16.95 | 17.00 | 110 | +0.05 |
| FFF Corp | 12.25 | 12.10 | 12.15 | 12.20 | 100 | +0.05 |
| GGG Inc | 8.75 | 8.65 | 8.70 | 8.75 | 80 | +0.05 |
| HHH Ltd | 23.00 | 22.80 | 22.90 | 23.00 | 400 | +0.10 |
| III Corp | 9.25 | 9.10 | 9.15 | 9.20 | 110 | +0.05 |
| JJJ Inc | 14.75 | 14.60 | 14.65 | 14.70 | 130 | +0.05 |
| KKK Ltd | 6.50 | 6.40 | 6.45 | 6.50 | 70 | +0.05 |
| LLL Corp | 19.50 | 19.40 | 19.45 | 19.50 | 250 | +0.05 |
| MMM Inc | 4.90 | 4.80 | 4.85 | 4.90 | 50 | +0.05 |
| NNN Ltd | 15.50 | 15.40 | 15.45 | 15.50 | 140 | +0.05 |
| OOO Corp | 11.75 | 11.60 | 11.65 | 11.70 | 100 | +0.05 |
| PPP Inc | 8.00 | 7.90 | 7.95 | 8.00 | 80 | +0.05 |
| QQQ Ltd | 20.50 | 20.40 | 20.45 | 20.50 | 250 | +0.05 |
| RRR Corp | 10.50 | 10.40 | 10.45 | 10.50 | 110 | +0.05 |
| SSS Inc | 15.25 | 15.10 | 15.15 | 15.20 | 150 | +0.05 |
| TTT Ltd | 7.25 | 7.15 | 7.20 | 7.25 | 90 | +0.05 |
| UUU Corp | 21.50 | 21.40 | 21.45 | 21.50 | 280 | +0.05 |
| VVV Inc | 5.75 | 5.65 | 5.70 | 5.75 | 70 | +0.05 |
| WWW Ltd | 17.25 | 17.10 | 17.15 | 17.20 | 110 | +0.05 |
| XXX Corp | 12.75 | 12.60 | 12.65 | 12.70 | 100 | +0.05 |
| YYY Inc | 8.90 | 8.80 | 8.85 | 8.90 | 80 | +0.05 |
| ZZZ Ltd | 23.25 | 23.10 | 23.15 | 23.20 | 350 | +0.05 |
| AAA Corp | 10.90 | 10.75 | 10.80 | 10.85 | 120 | +0.05 |
| BBB Inc | 15.90 | 15.75 | 15.80 | 15.85 | 150 | +0.05 |
| CCC Ltd | 7.40 | 7.25 | 7.30 | 7.35 | 90 | +0.05 |
| DDD Corp | 21.75 | 21.60 | 21.65 | 21.70 | 280 | +0.05 |
| EEE Inc | 5.90 | 5.75 | 5.80 | 5.85 | 70 | +0.05 |
| FFF Ltd | 17.50 | 17.35 | 17.40 | 17.45 | 110 | +0.05 |
| GGG Corp | 12.90 | 12.75 | 12.80 | 12.85 | 100 | +0.05 |
| HHH Inc | 9.40 | 9.25 | 9.30 | 9.35 | 80 | +0.05 |
| III Ltd | 23.75 | 23.60 | 23.65 | 23.70 | 400 | +0.10 |
| JJJ Corp | 10.95 | 10.80 | 10.85 | 10.90 | 110 | +0.05 |
| KKK Inc | 16.00 | 15.85 | 15.90 | 15.95 | 130 | +0.05 |
| LLL Ltd | 7.60 | 7.45 | 7.50 | 7.55 | 70 | +0.05 |
| MMM Corp | 20.25 | 20.10 | 20.15 | 20.20 | 250 | +0.05 |
| NNN Inc | 11.90 | 11.75 | 11.80 | 11.85 | 100 | +0.05 |
| OOO Ltd | 8.20 | 8.05 | 8.10 | 8.15 | 80 | +0.05 |
| PPP Corp | 24.50 | 24.35 | 24.40 | 24.45 | 400 | +0.10 |
| QQQ Inc | 9.10 | 8.95 | 9.00 | 9.05 | 110 | +0.05 |
| RRR Ltd | 14.60 | 14.45 | 14.50 | 14.55 | 130 | +0.05 |
| SSS Corp | 6.80 | 6.65 | 6.70 | 6.75 | 70 | +0.05 |
| TTT Inc | 19.75 | 19.60 | 19.65 | 19.70 | 250 | +0.05 |
| UUU Ltd | 5.00 | 4.85 | 4.90 | 4.95 | 50 | +0.05 |
| VVV Corp | 15.75 | 15.60 | 15.65 | 15.70 | 140 | +0.05 |
| WWW Inc | 11.95 | 11.80 | 11.85 | 11.90 | 100 | +0.05 |
| XXX Ltd | 8.40 | 8.25 | 8.30 | 8.35 | 80 | +0.05 |
| YYY Corp | 22.90 | 22.75 | 22.80 | 22.85 | 350 | +0.05 |
| ZZZ Inc | 10.40 | 10.25 | 10.30 | 10.35 | 120 | +0.05 |
| AAA Ltd | 16.20 | 16.05 | 16.10 | 16.15 | 150 | +0.05 |
| BBB Corp | 7.80 | 7.65 | 7.70 | 7.75 | 90 | +0.05 |
| CCC Inc | 21.90 | 21.75 | 21.80 | 21.85 | 280 | +0.05 |
| DDD Ltd | 6.00 | 5.85 | 5.90 | 5.95 | 70 | +0.05 |
| EEE Corp | 17.90 | 17.75 | 17.80 | 17.85 | 110 | +0.05 |
| FFF Inc | 13.10 | 12.95 | 13.00 | 13.05 | 100 | +0.05 |
| GGG Ltd | 9.60 | 9.45 | 9.50 | 9.55 | 80 | +0.05 |
| HHH Corp | 24.00 | 23.85 | 23.90 | 23.95 | 400 | +0.10 |
| III Inc | 11.00 | 10.85 | 10.90 | 10.95 | 100 | +0.05 |
| JJJ Ltd | 8.60 | 8.45 | 8.50 | 8.55 | 80 | +0.05 |
| KKK Corp | 20.75 | 20.60 | 20.65 | 20.70 | 250 | +0.05 |
| LLL Inc | 12.10 | 11.95 | 12.00 | 12.05 | 100 | +0.05 |
| MMM Ltd | 8.80 | 8.65 | 8.70 | 8.75 | 80 | +0.05 |
| NNN Corp | 24.75 | 24.60 | 24.65 | 24.70 | 400 | +0.10 |
| OOO Inc | 9.30 | 9.15 | 9.20 | 9.25 | 110 | +0.05 |
| PPP Ltd | 14.80 | 14.65 | 14.70 | 14.75 | 130 | +0.05 |
| QQQ Corp | 7.00 | 6.85 | 6.90 | 6.95 | 70 | +0.05 |
| RRR Inc | 19.90 | 19.75 | 19.80 | 19.85 | 250 | +0.05 |
| SSS Ltd | 5.10 | 4.95 | 5.00 | 5.05 | 50 | +0.05 |
| TTT Corp | 16.00 | 15.85 | 15.90 | 15.95 | 140 | +0.05 |
| UUU Inc | 12.20 | 12.05 | 12.10 | 12.15 | 100 | +0.05 |
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| YYY Ltd | 16.50 | 16.35 | 16.40 | 16.45 | 150 | +0.05 |
| ZZZ Corp | 7.90 | 7.75 | 7.80 | 7.85 | 90 | +0.05 |
| AAA Inc | 22.00 | 21.85 | 21.90 | 21.95 | 280 | +0.05 |
| BBB Ltd | 6.10 | 5.95 | 6.00 | 6.05 | 70 | +0.05 |
| CCC Corp | 18.00 | 17.85 | 17.90 | 17.95 | 110 | +0.05 |
| DDD Inc | 13.30 | 13.15 | 13.20 | 13.25 | 100 | +0.05 |
| EEE Ltd | 9.80 | 9.65 | 9.70 | 9.75 | 80 | +0.05 |
| FFF Corp | 24.25 | 24.10 | 24.15 | 24.20 | 400 | +0.10 |
| GGG Inc | 10.00 | 9.85 | 9.90 | 9.95 | 110 | +0.05 |
| HHH Ltd | 15.10 | 14.95 | 15.00 | 15.05 | 130 | +0.05 |
| III Corp | 7.10 | 6.95 | 7.00 | 7.05 | 70 | +0.05 |
| JJJ Inc | 20.25 | 20.10 | 20.15 | 20.20 | 250 | +0.05 |
| KKK Ltd | 12.30 | 12.15 | 12.20 | 12.25 | 100 | +0.05 |
| LLL Corp | 9.10 | 8.95 | 9.00 | 9.05 | 80 | +0.05 |
| MMM Inc | 24.90 | 24.75 | 24.80 | 24.85 | 400 | +0.10 |
| NNN Ltd | 10.30 | 10.15 | 10.20 | 10.25 | 110 | +0.05 |
| OOO Corp | 15.40 | 15.25 | 15.30 | 15.35 | 130 | +0.05 |
| PPP Inc | 7.30 | 7.15 | 7.20 | 7.25 | 70 | +0.05 |
| QQQ Ltd | 20.50 | 20.35 | 20.40 | 20.45 | 250 | +0.05 |
| RRR Corp | 12.40 | 12.25 | 12.30 | 12.35 | 100 | +0.05 |
| SSS Inc | 9.20 | 9.05 | 9.10 | 9.15 | 80 | +0.05 |
| TTT Ltd | 23.25 | 23.10 | 23.15 | 23.20 | 350 | +0.05 |
| UUU Corp | 10.80 | 10.65 | 10.70 | 10.75 | 120 | +0.05 |
| VVV Inc | 16.70 | 16.55 | 16.60 | 16.65 | 150 | +0.05 |
| WWW Ltd | 8.00 | 7.85 | 7.90 | 7.95 | 90 | +0.05 |
| XXX Corp | 22.25 | 22.10 | 22.15 | 22.20 | 280 | +0.05 |
| YYY Inc | 6.30 | 6.15 | 6.20 | 6.25 | 70 | +0.05 |
| ZZZ Ltd | 18.50 | 18.35 | 18.40 | 18.45 | 110 | +0.05 |
| AAA Corp | 13.60 | 13.45 | 13.50 | 13.55 | 100 | +0.05 |
| BBB Inc | 10.10 | 9.95 | 10.00 | 10.05 | 80 | +0.05 |
| CCC Ltd | 20.75 | 20.60 | 20.65 | 20.70 | 250 | +0.05 |
| DDD Corp | 12.60 | 12.45 | 12.50 | 12.55 | 100 | +0.05 |
| EEE Inc | 9.40 | 9.25 | 9.30 | 9.35 | 80 | +0.05 |
| FFF Ltd | 24.50 | 24.35 | 24.40 | 24.45 | 400 | +0.10 |
| GGG Corp | 10.50 | 10.35 | 10.40 | 10.45 | 110 | +0.05 |
| HHH Inc | 15.60 | 15.45 | 15.50 | 15.55 | 130 | +0.05 |
| III Ltd | 7.40 | 7.25 | 7.30 | 7.35 | 70 | +0.05 |
| JJJ Corp | 20.50 | 20.35 | 20.40 | 20.45 | 250 | +0.05 |
| KKK Inc | 12.50 | 12.35 | 12.40 | 12.45 | 100 | +0.05 |
| LLL Ltd | 9.30 | 9.15 | 9.20 | 9.25 | 80 | +0.05 |
| MMM Corp | 25.00 | 24.85 | 24.90 | 24.95 | 400 | +0.10 |
| NNN Inc | 10.60 | 10.45 | 10.50 | 10.55 | 110 | +0.05 |
| OOO Ltd | 15.70 | 15.55 | 15.60 | 15.65 | 130 | +0.05 |
| PPP Corp | 7.50 | 7.35 | 7.40 | 7.45 | 70 | +0.05 |
| QQQ Inc | 20.75 | 20.60 | 20.65 | 20.70 | 250 | +0.05 |
| RRR Ltd | 12.70 | 12.55 | 12.60 | 12.65 | 100 | +0.05 |
| SSS Corp | 9.50 | 9.35 | 9.40 | 9.45 | 80 | +0.05 |
| TTT Inc | 23.50 | 23.35 | 23.40 | 23.45 | 350 | +0.05 |
| UUU Ltd | 10.90 | 10.75 | 10.80 | 10.85 | 120 | +0.05 |
| VVV Corp | 16.90 | 16.75 | 16.80 | 16.85 | 150 | +0.05 |
| WWW Inc | 8.10 | 7.95 | 8.00 | 8.05 | 90 | +0.05 |
| XXX Ltd | 22.50 | 22.35 | 22.40 | 22.45 | 280 | +0.05 |
| YYY Corp | 6.40 | 6.25 | 6.30 | 6.35 | 70 | +0.05 |
| ZZZ Inc | 19.00 | 18.85 | 18.90 | 18.95 | 110 | +0.05 |
| AAA Ltd | 13.80 | 13.65 | 13.70 | 13.75 | 100 | +0.05 |
| BBB Corp | 10.30 | 10.15 | 10.20 | 10.25 | 80 | +0.05 |
| CCC Inc | 20.90 | 20.75 | 20.80 | 20.85 | 250 | +0.05 |
| DDD Ltd | 12.80 | 12.65 | 12.70 | 12.75 | 100 | +0.05 |
| EEE Corp | 9.60 | 9.45 | 9.50 | 9.55 | 80 | +0.05 |
| FFF Inc | 24.75 | 24.60 | 24.65 | 24.70 | 400 | +0.10 |
| GGG Ltd | 10.70 | 10.55 | 10.60 | 10.65 | 110 | +0.05 |
| HHH Corp | 15.80 | 15.65 | 15.70 | 15.75 | 130 | +0.05 |
| III Inc | 7.60 | 7.45 | 7.50 | 7.55 | 70 | +0.05 |
| JJJ Ltd | 20.75 | 20.60 | 20.65 | 20.70 | 250 | +0.05 |
| KKK Corp | 12.60 | 12.45 | 12.50 | 12.55 | 100 | +0.05 |
| LLL Inc | 9.40 | 9.25 | 9.30 | 9.35 | 80 | +0.05 |
| MMM Ltd | 25.10 | 24.95 | 25.00 | 25.05 | 400 | +0.10 |
| NNN Corp | 10.80 | 10.65 | 10.70 | 10.75 | 110 | +0.05 |
| OOO Inc | 15.90 | 15.75 | 15.80 | 15.85 | 130 | +0.05 |
| PPP Ltd | 7.70 | 7.55 | 7.60 | 7.65 | 70 | +0.05 |
| QQQ Corp | 20.90 | 20.75 | 20.80 | 20.85 | 250 | +0.05 |
| RRR Inc | 12.90 | 12.75 | 12.80 | 12.85 | | |

3:00 pm prices May 20

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FT SURVEYS

How to Make Inroads into the Japanese Market

On February 28, 1991, a European company announced a takeover bid for a Japanese company. Yamaichi Securities Co., Ltd. acting as dealer-manager assisted the European company, in just over three weeks, to successfully acquire a 99% interest in the Japanese target. This was the first TOB launched in Japan under the revised Securities and Exchange Law, which was amended recently along the lines of American and UK statutes. What are the requisite strategies for making a successful acquisition in the Japanese market—despite its reputation for being closed to foreign takeovers?

The dawning of a TOB era in Japan

On February 28, 1991, a full page announcement in Japan's leading newspapers heralded the coming of a new era:

Asea Brown Boveri (ABB) of Switzerland, the world's largest manufacturer of heavy electrical machinery, made a takeover bid through its affiliate Gadelius (Japan) K.K. for Fuso Power & Heat Industrial Co., Ltd., a leading maker of automotive painting equipment. In this acquisition, Yamaichi Securities Co., Ltd. acted as financial advisor to Gadelius and took part in the purchase as dealer-manager of the TOB. It was the first full-fledged TOB in Japan by a foreign-affiliated company made with the object of obtaining control of a Japanese business. Through this buy-out, Gadelius was able to expand into the Far East by establishing a strong foothold in the Japanese market and gain access to the heart of the Japanese automotive industry, represented by such makers as Toyota and Nissan.

On March 15, 1990, in an interview with the Nikkei Sangyo Shimbun, Isamu Suzuki, executive vice president of Gadelius and project leader in the recent TOB, had the following comments to make regarding business takeovers. "While we resorted to a buy-out because an in-house effort would have been too time consuming, purchase of a Japanese company requires the assistance of an intermediary to act as a matchmaker between the two parties. The process is slower when you have to negotiate through an intermediary rather than face-to-face with the counterparty's management, but in a corporate culture where face is highly valued, use of an intermediary is the key to a successful corporate acquisition."

And not just any intermediary—Gadelius was not alone in turning first to Yamaichi. In the first six successful takeover bids mounted in Japan by foreign companies, Yamaichi has mediated in four of them. The company's disproportional representation in the M&A league tables stems from its premier standing among the M&A houses in Japan. Since 1973, when Yamaichi established the first wholly separate M&A department in Japan, the company has recorded a long string of pioneering accomplishments: They handled the first tender offer by a foreign company of a Japanese company, the first acquisition by a foreign company of a quoted Japanese company, and the first successful tender by a Japanese company of a company from a rival *keiretsu*, or affiliated business group. Since then, Yamaichi has amassed a wide range of M&A experience, from TOBs, to asset transfers, including divestitures, equity participation and straightforward mergers.

Composition of M&A Announcements
(Involving Japanese Cos. only; Domestic/Foreign)

| | 1987 | 1988 | 1989 | 1990 | 1991 (-3.31) |
|--------|------|------|------|------|--------------|
| In-In | 219 | 223 | 240 | 293 | 83 |
| In-Out | 228 | 315 | 405 | 440 | 59 |
| Out-In | 22 | 17 | 15 | 18 | 5 |
| Total | 469 | 555 | 660 | 751 | 147 |

In-In = Japanese buyer and seller
In-Out = Japanese buyer, foreign seller
Out-In = Foreign buyer, Japanese seller

Expansion of the M&A market

The attached table illustrates the trend in mergers and acquisitions involving Japanese companies. It can be seen that, while the number of cross-border takeovers has remained more or less unchanged, domestic deals have surged recently, to become the most active sector in Japanese M&A.

The latest trend contradicts common opinion which holds that M&A deals targeting Japanese companies are met with strong resistance. The reasoning has been that managements feel paternalistic towards their companies, and so, relinquishing control to an outsider, regardless of nationality, amounts to failure and betrayal. Although there is more than a little truth in this, the statistics clearly show that even in Japan, M&A has taken firm root.

If a Japanese company now can purchase another Japanese company, what are the prospects, then, of a foreign company to do the same?

M&A as practised in Japan

"With the proper advice and guidance, a foreign firm should have no more difficulty than a Japanese company in striking a successful M&A deal," says Masaru Matsui, attorney-at-law and a legal advisor with Yamaichi's M&A department, who helped mediate between Gadelius and Fuso.

"For Japanese companies, internationalisation is a big issue and, in many cases, from the point of view of global business strategy, the potentially complementary relationship established by a foreign buyer would be a more desirable option," he adds.

It has taken a long time for TOBs to become accepted in Japan. In 1973, when Yamaichi's M&A department first opened its doors, the buying or selling of a Japanese company for any reason raised eyebrows. For Yamaichi, it has been a continuing search for ideas and techniques that can translate the practical benefits of healthy M&A into the idiom of Japanese business mores.

In the opinion of Genji Sugiyama, president of Yamaichi International (America) in New York, the base for Yamaichi's US M&A team, a TOB is still not without its pitfalls. "It is true, however, that any number of difficulties may arise from the clash of cultures as the two parties pursue their negotiations. The presence of a Japanese advisor who is comfortable in both cultures is indispensable for ironing out these problems and bringing the talks to a successful conclusion."



Masaru Matsui
Attorney-at-law and
legal advisor with
Yamaichi's M&A dept.

Tokuo Ukon, Managing Director and Chief Executive of Yamaichi International (Europe) in London, concurs, "The Gadelius-Fuso deal is proof that a foreign company with a clearly conceived business strategy, together with an experienced Japanese advisor, has a good chance of success in any bid for a Japanese business company."

Aside from the sweeping changes in Japanese perceptions of M&A as a viable business option, measures are also afoot to improve the infrastructure for corporate acquisitions, such as further revision of the TOB regulations.

According to Masaru Matsui, "Control over corporate acquisitions by foreign-owned businesses is now greatly relaxed, thanks to a revision of the TOB regulations in December 1990. The revision included, among other things, abolition of the requirement for advance notice to be made to the authorities, extension of the period for a TOB offer, and decontrol of the delegation of a proxy by a foreign company in filing a TOB notification."

"Additionally, regulations were eased in other related areas, such as the Large-Scale Retail Store Law, helping for instance, Toys 'R' Us, Inc. to advance into the Japanese market," he adds.

With a GNP of ¥389 trillion (fiscal 1989), the Japanese market is certain to become more open and attractive to foreign buyers.



Tokuo Ukon
Managing Director
& Chief Executive
Yamaichi International
(Europe) Limited

The strength of Yamaichi's traditional ties with the corporate sector is one element that has made the Group a leader in domestic and cross-border M&A. Yamaichi's full operational and managerial independence from any of Japan's large business and financial conglomerates allows its M&A team to move freely in contacting any company.

Yamaichi's M&A department maintains full-time staffs in New York, Los Angeles, Toronto, Montreal, and in London, which serves as the base for European coverage. These M&A teams are composed of legal, accounting and coverage specialists who work closely with Tokyo's M&A staff in providing coordinated global coverage. As for other markets, such as Asia and Australia, Yamaichi's local offices work jointly with the Tokyo M&A team.

To further strengthen its international presence, Yamaichi established a strategic alliance in October 1988, with Lodestar Partners, a US investment bank specialising in M&A.

Yamaichi Group's comprehensive business lines range from brokerage, portfolio advice and fund management to innovative corporate finance and M&A assistance. The central goal at Yamaichi is to serve clients in whichever market accommodates them best, through 28 overseas bases and 127 domestic branches as well as 10 affiliated companies.

For more information please contact:

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Issued by Yamaichi Securities Co., Ltd. and for the purposes of Section 67 of the Financial Services Act 1986, approved by Yamaichi International (Europe) Ltd., which is a member of The Securities Association

NOTICE TO THE NOTEHOLDERS OF STATE BANK OF SOUTH AUSTRALIA A\$ 50'000'000

Puttable Adjustable Rate Notes due June 11, 1992
(redeemable at the Noteholders option)
Unconditionally and Irrevocably guaranteed by
The Treasurer of the State of South Australia
(EC No. 52875)

According to Article 3(c) of the Terms and Conditions of the Notes the interest rate for the period June 11, 1991 to June 11, 1992 has been fixed at 10 7/8%.

The interest amount on A\$ 1000 comes to A\$ 105.625

In accordance with Article 5(b) of the Terms and Conditions of the Notes State Bank of South Australia will, at the option of the holder of any Note, redeem on any Interest Payment Date (June 11), such Note at its principal amount provided that all Unmatured Coupons relating thereto are attached thereto or surrendered therewith. To exercise such option the holder must deposit such Note together with all Unmatured Coupons relating thereto (other than the Coupon maturing on the Interest Payment Date on which such Note is to be redeemed) with any Paying Agent mentioned below not earlier than the date of publication of the Rate of Interest Amounts applicable to the Interest Period next following such Interest Payment Date nor later than the sixth Business Day prior to the Interest Payment Date. No Note, if so deposited, may be withdrawn without the prior consent of the State Bank of South Australia.

This year the Put period will run from May 21, 1991 to May 31, 1991.

May 21, 1991. By: Swiss Bank Corporation,
Agent Bank
For and on behalf of
State Bank of South Australia

Fiscal and Principal Paying Agent:
Swiss Bank Corporation, Basel

Paying Agents:
Banque Générale du Luxembourg S.A., Luxembourg
Swiss Bank Corporation, London
Swiss Bank Corporation (Canada), Toronto

INTERNATIONAL COMPANIES AND FINANCE

K-Mart unveils 7% rise in income

By Karen Zagor in New York

K-MART, the world's second biggest retailer, yesterday unveiled a 7 per cent improvement in first-quarter net income on sales which advanced 9 per cent.

For the three months ended May 1, K-Mart raised net income to \$107.5m, or 53 cents a share, against \$100.1m, or 50 cents, a year ago. Sales advanced to \$7.64bn from \$7.04bn.

The results were at the high end of expectations, and shares

in K-Mart gained \$1 1/4 to \$41 1/2 at midday yesterday.

Mr Joseph Antonini, chairman and chief executive, said the company was encouraged by the results "as favourable comparisons were achieved despite the difficult economic environment throughout the period".

He added that customers had reacted favourably to the company's merchandising programmes.

Selling, general and adminis-

trative expenses rose 4 per cent in the quarter to \$1.7bn from \$1.64bn.

K-Mart's gross margin in the quarter decreased to 24.8 per cent of sales from 25 per cent a year ago, reflecting a greater sales contribution from the company's lower-margin PACS Membership Warehouse business, and increased clearance mark-downs of winter apparel at the beginning of the quarter.

The pre-tax last-in first-out

charge was \$30m in 1991 compared with \$32.5m a year earlier.

K-Mart, which enlarged, refurbished or relocated 97 stores in the first quarter, said it planned to complete its programme for 450 to 500 projects by the end of the year.

K-Mart operates 2,387 K-Mart stores and is the parent company for Pay Less Drug Stores, Builders Square, Waldbaums, PACS Membership Warehouse and The Sports Authority.

CRA extends CAIL bid as acceptances fall short of target

By Kevin Brown in Sydney

CRA, the Australian mining group, yesterday extended its takeover offer for Coal and Allied Industries (CAIL) for the second time after its bid of A\$8.50 a share failed to attract sufficient support for control.

CRA, 49 per cent owned by RTZ of the US, said it had received acceptances for 33 per cent of CAIL's voting shares - well short of its target of 50.1 per cent.

The group said it had extended the offer until Friday to allow time for further acceptances to arrive "from individual shareholders and institutions who have had practical difficulties in accepting the offer".

Mr Duncan Sutherland, CRA's vice-president for strategy and acquisitions, said the group was hopeful that a "not insignificant number" of further shareholders would accept the bid, which values CAIL at A\$472m (about US\$370). Mr

Sutherland said CRA believed several larger shareholders would accept the offer because of concerns about the reduced liquidity of the shares and the likelihood of a fall in the market price, which has been buoyed by the bid.

The offer was increased from A\$7.55 a share and declared unconditional last week after CRA received only a handful of acceptances for its original bid, which valued the company at A\$436.

The shares closed 4 cents lower last night at A\$5.4, 4 cents above the offer price. The acquisition of CAIL would probably allow CRA to overtake the Broken Hill Proprietary Company as Australia's biggest coal exporter by the middle of the decade.

CAIL directors have argued that the bid does not adequately reflect the strategic value to CRA of its low-cost coal mines.

NY landmark up for sale

THE MOST famous skyscraper in America - the Empire State Building - has been put up for sale by its owner, Prudential Life Insurance Company of America, for about \$50m, Reuters reports.

Prudential was not available for comment on why it was up for sale, but there is speculation that the company might be under pressure to raise capital to offset bad real estate loans.

It is considered a bargain at today's real estate prices because a master lease, in effect since 1961, ties up actual

control of the skyscraper until the year 2078. Without that master lease, real estate experts say the price of the building would be over \$600m.

Prudential owns the building and the land it sits on at 34th Street and Fifth Avenue. It receives \$3.4m a year for the building, but this will be cut to \$2m next year.

The two real estate partnerships that manage the building keep all the profits from renting it above the fee paid to Prudential until their lease runs out in 2078, when the building will be 145 years old.

Toys 'R' Us falls to \$22.4m

By Karen Zagor

TOYS "R" US, the US chain of toy stores, yesterday turned in first-quarter net earnings of \$32.4m, or 8 cents a share, compared with \$32.2m, or 11 cents, a year earlier, although sales rose 9 per cent to \$1.63bn from \$1.44bn.

Mr Charles Lazarus, chairman and chief executive, said sales had increased in all three of the company's segments.

The results were in line with expectations and, at mid-session, shares in Toys "R" Us were unchanged at \$27 1/4 on the New York Stock Exchange.

The company was one of the last US retailers to feel the bite of the recession, but quarterly earnings started to slide in the Christmas quarter, largely due to aggressive discounting and promotions by other toy sellers.

Mr Lazarus said the store expansion programme was on schedule. The company operates 451 toy stores in the US, 97 toy stores overseas and 180 Kids "R" Us children's clothing stores. It plans to open about 80 toy stores, including its first in Japan and Spain.

Barlow Rand falls by 14% on steel unit loss

By Philip Gawth

BARLOW RAND, South Africa's largest industrial group, yesterday announced a 14 per cent profit decline in the six months to March as Middelburg Steel, a big subsidiary, suffered a loss.

Turnover rose 12 per cent to R15.5bn (\$5.55bn), but pressure on margins saw operating profit 1 per cent lower at R12bn.

Attributable profit was down to R49m from R40m. The dividend was maintained at 51 cents per share.

The lower profits reflect the R17m loss at Middelburg Steel which is suffering from oversupply in the world ferrochrome market and a strong rand. Barlows has announced it will be reducing its stake in wholly-owned Middelburg Steel later this year by a free distribution of shares to Barlow shareholders. This will make the group less susceptible to Middelburg Steel's cyclical earnings.

On the industrial side, good performances by sugar, Tiger Foods and pharmaceutical companies in particular saw contributions from food and pharmaceuticals rise 16 per cent to contribute 34 per cent of group profits. This was off-

set by a 27 per cent decline in the contribution from mining and processed minerals to only 22 per cent of the group total.

BARLOW MINES, the mining house controlled by Barlow Rand, said it might cut its annual dividend by up to 50 per cent because of restructuring costs.

The costs relate to the imminent disposal of its troubled Barlows/Barmine platinum interests. Negotiations with Impala Platinum on the disposal of the platinum interests have reached an "advanced stage".

Mr Dammy Watt, chairman, said an agreement with Impala would involve Rand Mines assuming about R200m of Barmine debt. It would also be followed by a Rand Mines write-down of its platinum investments.

At current share price levels this would total about R430m.

Attributable profit rose 8 per cent to R104.3m from R96.6m in the six months to the end of March on a 13 per cent increase in turnover to R866.6m.

The interim dividend was reduced to 100 cents per share from 120.

Interpublic takes control of TV game show group

By Alice Rawsthorn

INTERPUBLIC, one of the largest US marketing groups, has become the biggest player in television games shows by taking control of Fremantle International, which owns the rights to The Price Is Right, Family Feud and The Dating Game.

The company has increased its holding in Fremantle to 80 per cent for an undisclosed sum.

The remaining shares are owned by Mr Paul Talbot, who will continue as president. Fremantle specialises in buying the rights to US games shows and "repackaging" them for sale to television companies in other countries. The Dating Game, for instance, has been repackaged as Blind Date for the UK.

The Price Is Right, its most successful show, is now sold all over western Europe and is shown seven days a week on the TF1 channel in France. Fremantle has six shows a day on TF1 and seven a day on Channel 5 in Italy.

Interpublic, which owns the McCann-Erickson and Lintas international advertising agencies, first became involved with Fremantle two years ago when it bought 49 per cent of the equity.

The interpublic agencies have led the trend for large advertising groups to become more involved with programme production. Lintas has a production subsidiary, EC Television, which distributes Wheel of Fortune, the games show, and recently produced Riviera, the first pan-European soap opera.

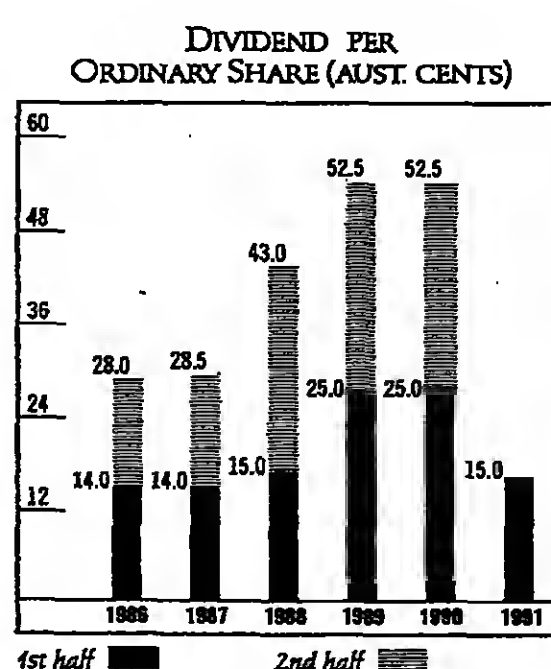
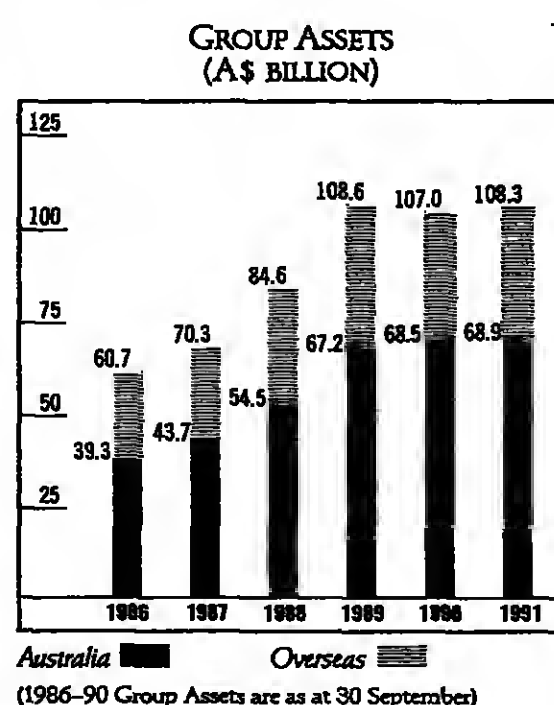
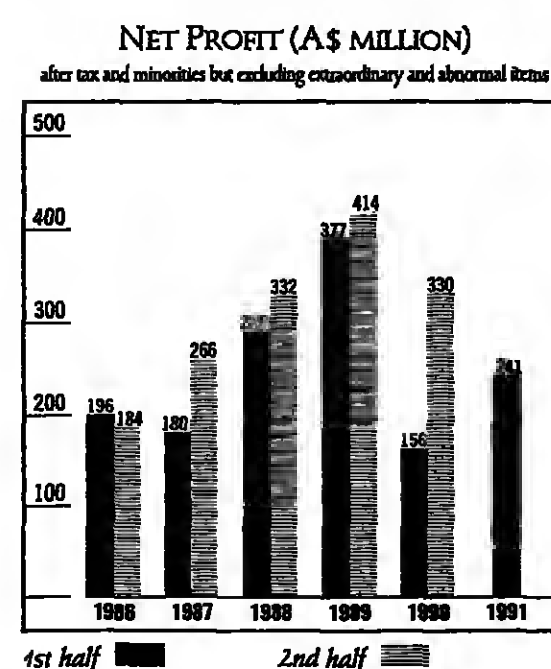
Westpac Banking Corporation GROUP PERFORMANCE

(Half year ended 31 March 1991)

| | | |
|---|------------------|-----------------|
| Operating Profit before Tax and Abnormal Item | A\$313 million | (£139 million) |
| Operating Profit after Tax and Minorities (excluding abnormal item of - A\$22 million [- £10 million]) | A\$241 million | (£ 107 million) |
| Interim Dividend per Ordinary Share (fully franked) | A\$0.15 cents | (7 pence) |
| Proprietors' (shareholders') Equity | A\$7.1 billion | (£3.2 billion) |
| Total Capital Resources | A\$9.7 billion | (£4.3 billion) |
| Risk Asset Capital Ratio (Reserve Bank of Australia guideline of 8%) | 10.1% | |
| Total Assets | A\$108.3 billion | (£48.2 billion) |
| Net Tangible Assets per Ordinary Share | A\$5.74 | (£2.55) |
| Earnings per Ordinary Share (excluding abnormal item) | A\$0.204 | (9.1 pence) |

Westpac is owned by over 131 500 Proprietors (shareholders) and provides financial services to over four million customers world-wide.

The figures above have been converted into GBP at the rate of AUD1 = GBP 0.44500.



OPERATING HIGHLIGHTS

(compared with half year ended 31 March 1990)

- Operating profit before income tax and abnormal items **increased 26%** to A\$313 million (£139 million).
- Profit on operations after tax and before abnormal items **increased 55%** to A\$241 million (£107 million).
- Charge against profits for bad debts and provisions for doubtful debts **decreased by 6%**.
- Growth in non interest expenses* at 1.7% was **the lowest** since 1982.

*Excluding depreciation and amortisation



Westpac Banking Corporation



Kingdom of Denmark

US\$ 250,000,000
Floating Rate Notes due May 1995

In accordance with the description of the Notes, notice is hereby given that for the interest period May 21, 1991 to November 21, 1991 the Notes will carry an interest rate of 10% per annum.

The interest payable on the relevant interest payment date, November 21, 1991 against coupon n°13 will be US\$11.11 for each US\$10,000 Note.



The Agent Bank
KREDIETBANK
S.A. LUXEMBOURGEOISE



REPUBLIC OF ICELAND

US\$100,000,000 Floating Rate Notes Due 1994

Notice is hereby given that the rate of interest has been fixed at 6.4% and that the interest payable on the relevant interest payment date November 21, 1991 against Coupon No. 5 in respect of US\$10,000 nominal of the notes will be US\$327.11.

May 21, 1991, London
By: Citibank, N.A. (CSCS Dept.) Agent Bank

CITIBANK

INTERNATIONAL COMPANIES AND FINANCE

Japanese property income lags expansion in sales

By Neil Weinberg in Tokyo

THREE leading Japanese real estate companies, Mitsui Real Estate, Mitsubishi Estate and Sumitomo Realty, enjoyed strong sales growth in the year to end-March 1991, but pre-tax profits did not keep pace under tighter financial conditions.

Mitsui Real Estate's sales rose 22.2 per cent to ¥789.88bn, (\$5.31bn) although pre-tax profits were up only 8.7 per cent to ¥131.1bn as the company's interest burden climbed ¥19.5bn to ¥80.3bn.

Mitsui expects sales for the

current year to surge to ¥960bn, although pre-tax profits will remain virtually flat at ¥160bn.

Mitsubishi Estate's sales climbed 7.5 per cent to ¥334.1bn as land and office leasing income rose 8.7 per cent, while pre-tax profits were up 5.3 per cent to ¥89.98bn.

Sales in the current fiscal year are forecast to increase to ¥350bn while profits will rise slightly to ¥90bn.

Sumitomo Realty's sales gained 15.6 per cent to

¥187.17bn, and pre-tax profits 6 per cent to ¥36.36bn, failing to reach double-digit growth for the first time in 11 years.

The strong sales performance was supported by leasing activities, which grew 25.1 per cent as 19 new office buildings came into operation.

Sales for the current year are projected to rise 12.2 per cent to ¥210bn.

However, pre-tax profits are expected to be only marginally higher at ¥37bn, due to the increased debt burden.

Rothmans Holdings turns in A\$107m in competitive market

By Kevin Brown in Sydney

ROTHMANS Holdings, a subsidiary of Rothmans International, yesterday announced a net profit of A\$107m (US\$63.5m), after extraordinary items, for the year to March 31 on sales of A\$1.62bn.

Rothmans said the result was "pleasing" in the light of strong competition in the Australian tobacco market, notably from Philip Morris of the US and W.D. & H.O. Wills of the UK.

The group said profit had increased by less than the rate of inflation, but the result was not comparable with earnings of A\$85.7m for the previous period, which was shortened to nine months because of a change in accounting policy.

The net profit was struck

after an extraordinary charge of A\$10.9m, reflecting the cost of withdrawal from the whole-sale distribution and warehousing of confectionery.

The directors said the final dividend would be 37 cents, making a total of 68 cents a share, fully franked. Rothmans paid a total dividend of 47 cents a share in the previous period.

The share price rose 15 cents to a record A\$12.90 on the Australian Stock Exchange following the result.

Mr John Utz, chairman, said: "The intense competitive activity in the industry throughout the region is unlikely to abate, but the immediate and long term outlook for the group is positive," he said.

Hanwa falls by 1.8% to Y37.6bn

By Emiko Terazono in Tokyo

HANWA, the Japanese trading company led by Mr Shigeru Kita, reported a 1.8 per cent drop in its consolidated pre-tax profits to Y37.6bn (\$270.50m) for the year to March 1991.

The company, known within the Japanese financial community for its aggressive speculation in the currency markets, said that despite the strong performances in its steel-related operations, appraisal losses on its cross-shareholdings and securities investment had hurt profits. Overall sales increased 0.3 per cent to Y773bn.

Operating profit rose 46.2 per cent due to lower fixed costs and selective orders. After-tax profit fell 7 per cent to Y24.4bn. Hanwa said it will reduce its annual dividend to Y13 per share from the previous year's Y15.25.

For the current year, Hanwa expects pre-tax profits to rise 6.2 per cent to Y40bn.

Koor back to profits at operating level

By Hugh Carnegie in Jerusalem

KOOR Industries, the trade union-owned Israeli group that has waged a four-year battle against liquidation, yesterday reported a big reduction in losses in 1990 and a return to significant profits at the operating level for the first time since the mid-1980s.

Inflation-adjusted losses at the country's biggest industrial group - whose interests include construction, chemicals, food and high-technology - were down to Shk95m (\$48.34m) from 1989's record Shk700m as a restructuring began to show results.

Koor said "irrefutable evidence" of the turnaround lay in the operating profit of Shk150m, against a profit of Shk3m in 1989 and an operating loss of Shk500m in 1987 at the height of Koor's troubles. Sales totalled Shk6.1bn, down more than 5 per cent from Shk6.4bn in 1989.

However, Mr Benjamin Gaon, Koor's chief executive, said the group's survival still rested on a rescheduling and

write-off arrangement covering its debts, which total more than \$1bn. Koor has not paid any principal or interest on its debts since the end of 1989.

Under the latest plan, which would reduce outstanding debts to \$700m, the government has agreed to provide some \$50m in guarantees, and Hevrat Ha'ovdim, the industrial arm of the Histadrut trade union federation which owns Koor, has agreed to inject \$25m in new equity capital and accept a rundown in its shareholding to 26 per cent.

Israeli and US bondholders have agreed a write-down and debt-equity swap arrangement. But the biggest creditors, the Israeli and foreign bank creditors, have yet to finalise terms. Mr Gaon said he was optimistic this would happen by September 30.

Most of the 1990 losses were accounted for by Koor's perennial problem units, Tadiran and Solam, which respectively showed losses of Shk54m and Shk49m.

Adsteam shares fall after exchange lifts suspension

By Kevin Brown

SHARES in two of the main companies in the loosely-knit Adelaide Steamship group were marked down heavily yesterday when a three-week suspension was lifted by the Australian Stock Exchange.

Adelaide Steamship, the flagship company, closed 25 per cent lower at 9 cents, and David Jones, the retailing group, closed down 13 cents at 30 cents. However, shares in Tooth, an investment company, rose by 4 cents to 38 cents.

Trading in the three was suspended after the collapse of a reconstruction plan which would have led to a merger with Industrial Equity, a jointly-owned subsidiary which owns the successful Wool-

worths supermarket chain and other assets. The stock exchange is believed to have dropped plans to reinstate the shares last week after the leaking of a prospectus for National Foods, a new company being floated to acquire some of the leading brands owned by Industrial Equity.

The exchange agreed to lift the suspension after the prospectus was registered with the Australian Securities Commission, the corporate watchdog.

The Adelaide Steamship group, formerly controlled by Mr John Spalvin, has until the end of the year to negotiate a reconstruction with its bankers, following a moratorium on the group's A\$6bn (US\$4.60bn) debts.

Printer's sales pass Y1,000bn

By Neil Weinberg

DAI NIPPON Printing, Japan's largest printing company, reported a 4.6 per cent rise in pre-tax profit to Y74.37bn (\$534.96m) on a 7.8 per cent increase in sales to Y4.031bn in the year to end-March 1991.

It plans a memorial dividend of Y2.5 per share to celebrate sales above Y1,000bn for the first time. The payment will bring total dividends for the year to Y7.5 per share.

Control component maker advances 2% to Y27.78bn

OMRON, Japan's top maker of control components, reported a 2.3 per cent rise in pre-tax profit to Y27.78bn (\$199.78m) for the year to end-March, writes Neil Weinberg in Tokyo.

Total sales for the period were Y376.58bn, up 7.4 per cent from a year earlier, reflecting the continued growth in the Japanese economy.

Omron expects sales for

the current year to increase about 12 per cent to Y420bn on strong sales of its mainline control components, health care and office automation products.

However, pre-tax profits are forecast to decline slightly to Y26bn due to increased investments in plant and equipment under the company's Golden 90s Plan, a company spokesman said.

This announcement appears as a matter of record only.

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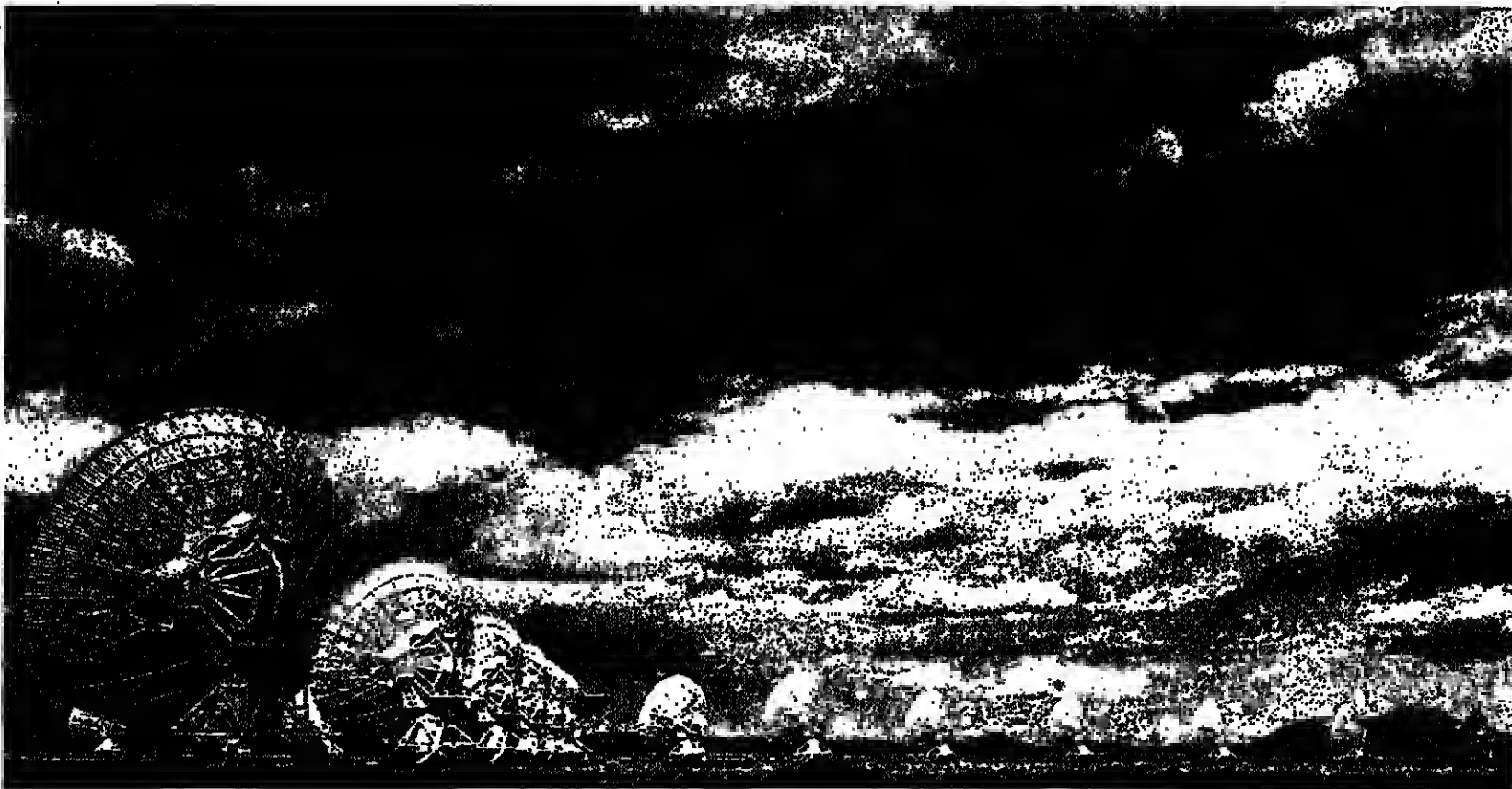


National Power

THE BANK OF NEW YORK

For further information regarding The Bank of New York's ADR Services, please contact Kenneth A. Lopian in New York (212) 815-2084, or Michael C. McAuliffe in London (071) 322-6336.

Our 1990 balance: 22,000,000 phone units



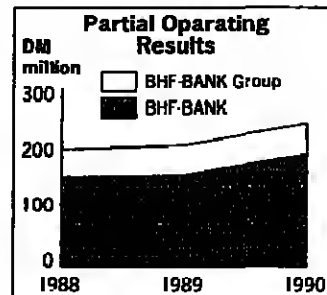
Close, worldwide communication with our customers is a hallmark of our individual counseling and personal service. The success of our diversified activities was made particularly evident in 1990 by lending business performance.

The high growth rate in the German economy generated strong demand from our customers for investment credits, as well as for operating capital and trade financing.

Loans to corporate clients alone rose by approximately one-third. Internationally, too, we succeeded in expanding our lending business to a disproportionately high extent; Group credit volume rose to DM 31.4 billion.

Additionally, our corporate finance activities were further intensified. In 1990 we introduced the shares of three companies on the stock exchange, and in M&A counseling we achieved a transaction volume in excess of DM 1 billion through our subsidiary "Frankfurt Consult".

With in-depth counseling and customized problem solutions, we shall continue to cultivate the style of a merchant bank - a BHF-BANK tradition for more than 100 years.



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WALTER BAU GROUP, Borken,

through its subsidiary

Fougerolle GmbH, Düsseldorf

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Kasernenstrasse 12
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Corporate Finance
6, Rue Piccini
75116 PARIS

Christiania Bank og Kreditkasse

(Incorporated in the Kingdom of Norway with limited liability)

US\$100,000,000
Floating Rate Senior Notes Due May 1995
(of which US\$75,000,000 has been issued as Initial Tranches)

Notice is hereby given that the Rate of Interest has been fixed at 10.5% and that the interest payable on the relevant Interest Payment Date November 21, 1991 against Coupon No. 13 is, in respect of US\$10,000 nominal of the Notes will be US\$36.67 and in respect of US\$250,000 nominal Notes will be US\$141.67.

May 21, 1991, London
By: Citibank, N.A. (CSI Dept.), Agent Bank

CITIBANK

First Union Corporation
U.S. \$150,000,000
Floating Rate
Notes due 1996

The rate of interest per annum on First Union Corporation's U.S. \$150,000,000 Floating Rate Notes due 1996 for the interest period beginning 20th May, 1991, and ending 20th August, 1991, the next interest payment date, will be 6%. The amount of interest payable for such interest period on each \$10,000 principal amount of the Notes will be \$158.13.

May 21, 1991, London
By: Bankers Trust Company, London, Agent Bank

FT GUIDE TO WORLD CURRENCIES

The table below gives the latest available rates of exchange (rounded) against four key currencies on Monday, May 20, 1991. In some cases the rate is nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

| COUNTRY | £ STG | US \$ | D-MARK | YEN | COUNTRY | £ STG | US \$ | D-MARK | YEN |
|--------------------------------|---------|---------|---------|---------|---------------------------|---------|----------|----------|----------|
| Algeria (Algeria) | 99.25 | 57.757 | 33.4175 | 41.7994 | China (China) | 618.13 | 399.587 | 208.125 | 260.265 |
| Algeria (Dinar) | 20.60 | 17.2195 | 9.9663 | 4.1646 | Czechia (Czechia) | 1.00 | 0.9817 | 0.3362 | 0.421 |
| Angola (Kwanza) | 10.0775 | 5.824 | 3.393 | 4.2431 | Denmark (Danish Krone) | 304.90 | 189.947 | 107.30 | 136.738 |
| Argentina (Peso) | 183.60 | 100.505 | 61.8181 | 77.3552 | Egypt (Egyptian Pound) | 11.3025 | 6.4099 | 3.8557 | 4.7382 |
| Australia (Dollar) | 1.0775 | 0.6924 | 0.4313 | 0.7444 | France (French Franc) | 6.5595 | 2.7674 | 1.6666 | 1.9364 |
| Bahamas (Bahama \$) | 1.7190 | 1.00 | 0.625 | 0.7737 | Germany (Mark) | 1.00 | 1.00 | 1.00 | 1.00 |
| Bahrain (Dinar) | 0.3491 | 0.2136 | 0.1318 | 0.1627 | Ghana (Cedi) | 1.00 | 0.5737 | 0.2327 | 0.2937 |
| Bangladesh (Taka) | 56.00 | 33.7405 | 19.2386 | 24.431 | Greece (Drachma) | 340.75 | 207.25 | 124.00 | 156.25 |
| Barbados (Dollar) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Hong Kong (Dollar) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Belize (Dollar) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Hungary (Forint) | 130.85 | 76.1196 | 44.0572 | 55.0947 |
| Bermuda (Dollar) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Iceland (Icelandic Krona) | 104.35 | 60.7038 | 33.1174 | 43.9368 |
| Bhutan (Ngultrum) | 0.50 | 0.3125 | 0.1953 | 0.2438 | India (Rupee) | 30.24 | 18.2443 | 10.1171 | 12.8525 |
| Bolivia (Boliviano) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Indonesia (Rupiah) | 3013.30 | 1898.65 | 1116.26 | 1395.94 |
| Bosnia (Convertible Mark) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Israel (Sheqel) | 1.00 | 0.5737 | 0.2327 | 0.2937 |
| Brazil (Cruzado) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Italy (Lira) | 2000.25 | 1262.29 | 742.172 | 928.125 |
| Bulgaria (Lev) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Japan (Yen) | 1.00 | 0.007364 | 0.002936 | 0.003609 |
| Burkina Faso (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Korea (Won) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Burundi (Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Malaysia (Ringgit) | 1.00 | 0.5737 | 0.2327 | 0.2937 |
| Cambodia (Riel) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Mexico (Peso) | 1.00 | 0.052064 | 0.019608 | 0.024666 |
| Cameroon (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Moldova (Leu) | 1.00 | 0.5737 | 0.2327 | 0.2937 |
| Canada (Dollar) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Morocco (Dirham) | 1.00 | 0.070969 | 0.026803 | 0.033511 |
| Cape Verde (Escudo) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Netherlands (Guilder) | 1.00 | 0.376031 | 0.143643 | 0.182341 |
| Cayman Islands (Dollar) | 0.50 | 0.3125 | 0.1953 | 0.2438 | New Zealand (Dollar) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Chad (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Norway (Krone) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Chile (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Pakistan (Rupee) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| China (Renminbi Yuan) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Paraguay (Guarani) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Colombia (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Peru (Nuevo Sol) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Costa Rica (Costa Rican Colon) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Philippines (Peso) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Cote d'Ivoire (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Poland (Zloty) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Cuba (Cuban Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Portugal (Escudo) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Cyprus (Cypriot Pound) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Romania (Leu) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Czechia (Czech Koruna) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Saudi Arabia (Riyal) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Denmark (Danish Krone) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Senegal (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Sierra Leone (Leone) | 0.50 | 0.3125 | 0.1953 | 0.2438 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Singapore (Dollar) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Slovakia (Slovak Koruna) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Slovenia (Tolar) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | South Africa (Rand) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Spain (Peseta) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Sweden (Krona) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Switzerland (Franc) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Taiwan (Dollar) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Tanzania (Shilling) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Thailand (Baht) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Togo (CFA Franc) | 0.50 | 0.3125 | 0.1953 | 0.2438 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Tonga (Paanga) | 0.50 | 0.3125 | 0.1953 | 0.2438 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Tunisia (Dinar) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Turkey (Lira) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Turkmenistan (Manat) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Ukraine (Hryvnia) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | United Kingdom (Sterling) | 1.00 | 0.7812 | 0.3125 | 0.3906 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | United States (Dollar) | 1.00 | 1.00 | 1.00 | 1.00 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Uruguay (Peso) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Venezuela (Bolívar) | 1.00 | 0.000700 | 0.000270 | 0.000336 |
| Dominican Republic (Peso) | 0.50 | 0.3125 | 0.1953 | 0.2438 | Zimbabwe (Dollar) | 1.00 | 0.000700 | 0.000270 | 0.000336 |

Special Drawing Rights May 17, 1991 United Kingdom £0.774433 United States \$1.34683 Germany 0 Mark 2.29706 Japan Yen185.801
European Currency Unit May 20, 1991 United Kingdom £1.666331 United States \$1.20776 Germany 0 Mark 2.05776 Japan Yen166.396

Abbreviations: (a) Free rate; (b) Banknote rate; (c) Commercial rate; (d) Controlled rate; (e) Export rate; (f) Non-commercial rate; (g) Business rate; (h) Buying rate; (i) Selling rate; (j) Money market rate; (k) Public treasury rate; (l) Official rate; (m) Preferred rate; (n) Commercial rate; (o) Parallel rate; (p) Selling rate; (q) Tourist rate; (r) Carriers' rate; (s) Freight rate; (t) Freight rate; (u) Freight rate; (v) Freight rate; (w) Freight rate; (x) Freight rate; (y) Freight rate; (z) Freight rate; (aa) Freight rate; (ab) Freight rate; (ac) Freight rate; (ad) Freight rate; (ae) Freight rate; (af) Freight rate; (ag) Freight rate; (ah) Freight rate; (ai) Freight rate; (aj) Freight rate; (ak) Freight rate; (al) Freight rate; (am) Freight rate; (an) Freight rate; (ao) Freight rate; (ap) Freight rate; (aq) Freight rate; (ar) Freight rate; (as) Freight rate; (at) Freight rate; (au) Freight rate; (av) Freight rate; (aw) Freight rate; (ax) Freight rate; (ay) Freight rate; (az) Freight rate; 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(db) Freight rate; (dc) Freight rate; (dd) Freight rate; (de) Freight rate; (df) Freight rate; (dg) Freight rate; (dh) Freight rate; (di) Freight rate; (dj) Freight rate; (dk) Freight rate; (dl) Freight rate; (dm) Freight rate; (dn) Freight rate; (do) Freight rate; (dp) Freight rate; (dq) Freight rate; (dr) Freight rate; (ds) Freight rate; (dt) Freight rate; (du) Freight rate; (dv) Freight rate; (dw) Freight rate; (dx) Freight rate; (dy) Freight rate; (dz) Freight rate; (ea) Freight rate; (eb) Freight rate; (ec) Freight rate; (ed) Freight rate; (ee) Freight rate; (ef) Freight rate; (eg) Freight rate; (eh) Freight rate; (ei) Freight rate; (ej) Freight rate; (ek) Freight rate; (el) Freight rate; (em) Freight rate; (en) Freight rate; (eo) Freight rate; (ep) Freight rate; (eq) Freight rate; (er) Freight rate; (es) Freight rate; (et) Freight rate; (eu) Freight rate; (ev) Freight rate; (ew) Freight rate; (ex) Freight rate; (ey) Freight rate; (ez) Freight rate; (fa) Freight rate; (fb) Freight rate; (fc) Freight rate; (fd) Freight rate; (fe) Freight rate; (ff) Freight rate; (fg) Freight rate; (fh) Freight rate; (fi) Freight rate; (fj) Freight rate; (fk) Freight rate; (fl) Freight rate; (fm) Freight rate; (fn) Freight rate; (fo) Freight rate; (fp) Freight rate; (fq) Freight rate; (fr) Freight rate; (fs) Freight rate; (ft) Freight rate; (fu) Freight rate; (fv) Freight rate; (fw) Freight rate; (fx) Freight rate; (fy) Freight rate; (fz) Freight rate; (ga) Freight rate; (gb) Freight rate; (gc) Freight rate; (gd) Freight rate; (ge) Freight rate; (gf) Freight rate; (gg) Freight rate; (gh) Freight rate; (gi) Freight rate; (gj) Freight rate; (gk) Freight rate; (gl) Freight rate; (gm) Freight rate; (gn) Freight rate; (go) Freight rate; (gp) Freight rate; (gq) Freight rate; (gr) Freight rate; (gs) Freight rate; (gt) Freight rate; (gu) Freight rate; (gv) Freight rate; (gw) Freight rate; (gx) Freight rate; (gy) Freight rate; (gz) Freight rate; (ha) Freight rate; (hb) Freight rate; (hc) Freight rate; (hd) Freight rate; (he) Freight rate; (hf) Freight rate; (hg) Freight rate; (hh) Freight rate; (hi) Freight rate; (hj) Freight rate; (hk) Freight rate; (hl) Freight rate; (hm) Freight rate; (hn) Freight rate; (ho) Freight rate; (hp) Freight rate; (hq) Freight rate; (hr) Freight rate; (hs) Freight rate; (ht) Freight rate; (hu) Freight rate; (hv) Freight rate; (hw) Freight rate; (hx) Freight rate; (hy) Freight rate; (hz) Freight rate; (ia) Freight rate; (ib) Freight rate; (ic) Freight rate; (id) Freight rate; (ie) Freight rate; (if) Freight rate; (ig) Freight rate; (ih) Freight rate; (ii) Freight rate; (ij) Freight rate; (ik) Freight rate; (il) Freight rate; (im) Freight rate; (in) Freight rate; (io) Freight rate; (ip) Freight rate; (iq) Freight rate; (ir) Freight rate; (is) Freight rate; (it) Freight rate; (iu) Freight rate; (iv) Freight rate; (iw) Freight rate; (ix) Freight rate; (iy) Freight rate; (iz) Freight rate; (ja) Freight rate; (jb) Freight rate; (jc) Freight rate; (jd) Freight rate; (je) Freight rate; (jf) Freight rate; (jg) Freight rate; (jh) Freight rate; (ji) Freight rate; (jj) Freight rate; (jk) Freight rate; (jl) Freight rate; (jm) Freight rate; (jn) Freight rate; (jo) Freight rate; (jp) Freight rate; (jq) Freight rate; (jr) Freight rate; (js) Freight rate; (jt) Freight rate; (ju) Freight rate; (jv) Freight rate; (jw) Freight rate; (jx) Freight rate; (jy) Freight rate; (jz) Freight rate; (ka) Freight rate; (kb) Freight rate; (kc) Freight rate; (kd) Freight rate; (ke) Freight rate; (kf) Freight rate; (kg) Freight rate; (kh) Freight rate; (ki) Freight rate; (kj) Freight rate; (kk) Freight rate; (kl) Freight rate; (km) Freight rate; (kn) Freight rate; (ko) Freight rate; (kp) Freight rate; (kq) Freight rate; (kr) Freight rate; (ks) Freight rate; (kt) Freight rate; (ku) Freight rate; (kv) Freight rate; (kw) Freight rate; (kx) Freight rate; (ky) Freight rate; (kz) Freight rate; (la) Freight rate; (lb) Freight rate; (lc) Freight rate; (ld) Freight rate; (le) Freight rate; (lf) Freight rate; (lg) Freight rate; (lh) Freight rate; (li) Freight rate; (lj) Freight rate; (lk) Freight rate; (ll) Freight rate; (lm) Freight rate; (ln) Freight rate; (lo) Freight rate; (lp) Freight rate; (lq) Freight rate; (lr) Freight rate; (ls) Freight rate; (lt) Freight rate; (lu) Freight rate; (lv) Freight rate; (lw) Freight rate; (lx) Freight rate; (ly) Freight rate; (lz) Freight rate; (ma) Freight rate; (mb) Freight rate; (mc) Freight rate; (md) Freight rate; (me) Freight rate; (mf) Freight rate; (mg) Freight rate; (mh) Freight rate; (mi) Freight rate; (mj) Freight rate; (mk) Freight rate; (ml) Freight rate; (mm) Freight rate; (mn) Freight rate; (mo) Freight rate; (mp) Freight rate; (mq) Freight rate; (mr) Freight rate; (ms) Freight rate; (mt) Freight rate; (mu) Freight rate; (mv) Freight rate; (mw) Freight rate; (mx) Freight rate; (my) Freight rate; (mz) Freight rate; (na) Freight rate; (nb) Freight rate; (nc) Freight rate; (nd) Freight rate; (ne) Freight rate; (nf) Freight rate; (ng) Freight rate; (nh) Freight rate; (ni) Freight rate; (nj) Freight rate; (nk) Freight rate; (nl) Freight rate; (nm) Freight rate; (nn) Freight rate; (no) Freight rate; (np) Freight rate; (nq) Freight rate; (nr) Freight rate; (ns) Freight rate; (nt) Freight rate; (nu) Freight rate; (nv) Freight rate; (nw) Freight rate; (nx) Freight rate; (ny) Freight rate; (nz) Freight rate; (oa) Freight rate; (ob) Freight rate; (oc) Freight rate; (od) Freight rate; (oe) Freight rate; (of) Freight rate; (og) Freight rate; (oh) Freight rate; (oi) Freight rate; (oj) Freight rate; (ok) Freight rate; (ol) Freight rate; (om) Freight rate; (on) Freight rate; (oo) Freight rate; (op) Freight rate; (oq) Freight rate; (or) Freight rate; (os) Freight rate; (ot) Freight rate; (ou) Freight rate; (ov) Freight rate; (ow) Freight rate; (ox) Freight rate; (oy) Freight rate; (oz) Freight rate; (pa) Freight rate; (pb) Freight rate; (pc) Freight rate; (pd) Freight rate; (pe) Freight rate; (pf) Freight rate; (pg) Freight rate; 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INTERNATIONAL CAPITAL MARKETS

Japan Highway expected to launch \$300m issue

By Simon London

JAPAN HIGHWAY, the Japanese government-backed agency, is expected to launch a \$300m 10-year bond issue today in the international bond market.

The issue is expected to be lead managed by IBJ and priced to yield around 45 basis points more than US Treasury securities.

Other borrowers may look to the dollar sector of the market this week. However, although

INTERNATIONAL BONDS

demand for Eurodollar securities is buoyant, interest rate and currency swaps opportunities are few and this is deterring potential borrowers.

Elsewhere, the European Investment Bank is preparing to launch a £500m to £600m 10-year issue, possibly tomorrow, lead managed by Banca Commerciale Italiana. Italian investors do not pay withholding tax on bonds issued by the EIB and syndicate officials anticipate that most of the issue will be sold to Italian investors.

Yesterday the market was subdued, with many European markets shut for public holidays. Bradford & Bingley, the latest UK mutual institution to issue floating-rate notes, raising £100m over four years with a deal lead-managed by UBS Phillips & Drew.

The notes pay a margin of 1/2 per cent over the London interbank offered rate and were referred to investors at a fixed price of \$9.54. At this price, the discounted margin is 26.82 basis points. The deal traded at \$9.50 bid, against an issue price of par and full fees of 56 basis points.

The pricing was regarded as safe by participants in the deal,

and underwriting fees of 10 basis points were seen as fair. Several established firms have declined to participate in many of the sterling floating-rate deals this year, including last week's £100m five-year deal by the Woodwich Building Society, because fees were seen to be an inadequate reflection of underwriting risk.

Yesterday's deal was priced to reflect the fact that the borrower, currently rated AA-3 by Moody's Investors Service, has been placed on credit watch and may soon be downgraded to single-A following the acquisition of the Leamington Spa Building Society.

The credit quality of many banks and building societies, at least as measured by credit rating agencies, has continued to decline this year. While the agencies sometimes disagree about the rating of each institution, the trend is still down.

Last week, Standard & Poor's downgraded the senior debt ratings of Banque Nationale de Paris and Société Générale from AA+ to AA. Also last week, Moody's cut the senior debt rating of Bank of Scotland from AA3 to A1.

Other big banks have suffered downgrades this year. Includes Barclays, which lost its coveted triple-A credit rating from S&P. It now stands at AA1.

Downgrades have come against a background of improving economic conditions in many of the big economies. Moreover, bond market investors have shown an increased willingness to buy securities issued by banks and yield spreads have narrowed significantly since early spring.

For example, National Westminster Bank's \$750m subordinated debt issue was launched in the US market in late April at a spread of 140 basis points over US Treas-

uries. By the end of last week, the spread had narrowed to 120 basis points.

The Eurobond market is behind the US in the rehabilitation of financial institutions as broadly acceptable issuers. If the current trend continues, however, some variable rate note (VRN) issues may soon successfully complete their remarketing process.

The interest margin on VRNs is determined at a three-monthly remarketing or auction process, subject to an upper limit or "fall back" margin. If the fall-back margin is reached, the remarketing process is suspended, making the instruments very hard to trade.

So far this year, no VRN issue has completed a successful remarketing. All are illiquid in the hands of investors and are paying the fall-back interest rate.

Based on pure yield calculations, this could soon change. On a swapped basis, NatWest's subordinated Yankee bond issue now pays around 85 basis points over the London interbank offered rate. The bank's \$300m VRN issue maturing August 2008 has a fall-back margin of 70 basis points over Libor.

However, many of the investors who bought VRNs to manage short-term liquidity may not be willing to risk being locked in at the fall-back margin again. These investors may now switch to other less complex forms of short-term investment, such as commercial paper, despite the rewards of VRNs in terms of absolute yield.

BOC Group, the UK industrial gases group, has doubled the size of its sterling commercial paper programme to £100m. NatWest Capital Markets and Barclays de Zoete Wedd are dealers to the programme.

Danish bank to handle big Polish brewery sale

By Xueling Lin in Copenhagen

SANKT ANNE Bank, a small Danish bank, will handle an ambitious privatisation plan covering the entire Polish brewery sector.

The privatisation will cover 24 breweries valued at about \$250m. It will involve the sale of shares in the state-owned breweries as well as a new rights issue.

Mr Kristof Zorba, director of Sankt Anne Bank, told a Danish newspaper the privatisation agreement with the Polish government represented a significant step for the bank.

Sankt Anne was active in the brewery sector in a package deal which will cover everything from financing, management to social and health considerations.

"The privatisation is the first to cover not just a single factory but an entire industrial sector," said Mr Zorba. "The re-structuring of the brewery sector is a package deal which will cover everything from financing, management to social and health considerations."

The Polish breweries collectively produce about 12m hectolitres of beer and spirits a year, quantities which rival those produced by some of the largest breweries in the world.

The bank does not expect difficulties in the sale of the brewery shares, which are 100 per cent state-owned at present.

The privatisation is expected to take place via "bundles" made up of existing shares in the breweries, which will be given a symbolic price, combined with a new rights issue of shares. Sale of the bundles will take place in Poland as well as overseas.

The structure for the privatisation has been worked out by Sankt Anne Bank. It expects the "bundle" system to be used again in subsequent privatisations in Poland if it proves successful for the breweries.

Mr Zorba said Polish breweries needed enormous investment because of a lack of basic manufacturing processes.

Keeping a tight timetable on debt

Tracy Corrigan finds MTR confident of holding down interest costs

HONG KONG'S largest borrower, Mass Transit Railway (MTR), has set itself some ambitious targets. The company plans to repay its HK\$1.7bn (US\$2.2bn) debt by the end of the decade and to refinance substantial borrowings ahead of and beyond the colony's return to Chinese rule in 1997.

At the same time, the company is trying to minimise its high interest costs against the negative impact of Hong Kong's political position and a worldwide squeeze on credit.

MTR, which carries 2m passengers a day, boasts a strong cash-flow, but expensive project financing has led the company with its outstanding debt. Its interest costs last year came to HK\$1.7bn.

Mr Roger Moss, MTR's finance director, is confident the company's cash-flow is "sufficient to cover the heavy burden of interest, given our projected operating profits".

The need to counteract external uncertainties has fostered advance planning. The MTR finance team has projected cash-flows and borrowing plans years in advance, constructing a "preferred financing model" which is split into different types of debt according to business projections.

For example, the company aims to hold 80 per cent of its borrowings in Hong Kong dollars.

"We look at our future financing requirements against the model, and against the reality of the market," said Mr Roger Moss, MTR's finance director. The practical considerations of



An MTR station: cash-flow sufficient, says company

fund-raising can then be matched to theoretical requirements through the use of the swap market. (MTR's ability to use the swap market was written into its ordinances earlier this year after a ruling that UK local authorities were not legally empowered to enter swap agreements prompted concern about MTR's status.)

Despite the political uncertainty facing Hong Kong, MTR's credit rating has held up relatively well. Its foreign currency debt is rated A3 by Moody's and A by Standard & Poor's, having dropped a notch after the Tsimshatsui Square massacre in 1989.

MTR has so far been able to press ahead with its financing plans. Next week, a \$5bn (\$35.97m) shibori - a private placement in the Japanese domestic market - will be signed. The seven-year deal is the first debt which matures

after Hong Kong's return to China in 1997.

This week, MTR signed a US\$100m five-year issue of floating-rate notes with Hong Kong dollar debt warrants attached.

These deals, added to a HK\$750m loan facility arranged by Warley, have allowed MTR to complete half its HK\$4.5bn borrowing programme so far this year (MTR's financial year ends in December).

However, MTR has seen its borrowing costs rise as a result of Hong Kong's precarious position. In the last two years, MTR has been forced to raise its funding target by about 20 basis points, to around 45 basis points above the London interbank offered rate. However, concern about Hong Kong's political situation broadly coincided with a worldwide tightening of credit, as US banks were squeezed by recession,

and Japanese banks struggled to meet new guidelines for capital. Consequently, Mr Moss says, it is difficult to apportion blame for the rise in funding costs.

But with many European and US borrowers having experienced similar increases in costs of funds - while China has had a hundred basis points added to its financing costs - MTR appears to have escaped relatively lightly.

Despite its recent achievement in funding a little beyond the date for Chinese rule, MTR is still struggling to extend its maturity profile, since nearly all its debt matures before 1997 and some will have to be refinanced.

"We like to have our financing pre-arranged 18 to 24 months ahead," said Mr Moss. There is provision for pre-funding of up to HK\$2bn, which is then invested in the financial markets.

Later this year, MTR will again look to Japan for financing, probably with a public issue in the domestic market. MTR is also considering setting up a US medium-term note programme, to complement its Euro-MTN programme (to which it also plans to add some dealers).

The company will consider carefully whether to use derivative products other than swaps to reduce costs. On two previous deals, MTR has sold floor options on the US dollar, to reduce overall funding costs. Those positions were not hedged, as the company was taking a view on the market.

Apasco places \$50m in debentures

By Simon London

APASCO, the Mexican cement producer, has raised \$50m of equity-linked capital from a placing of convertible subordinated debentures with international investors.

The placing was arranged by the International Finance Corporation, the arm of the World Bank devoted to the private sector in developing countries, and Bear Stearns.

Conversion into Apasco common stock is based on a formula which takes into account the current market price of the shares and the company's book value

per share, expressed in US dollars.

Apasco has been a client of the IFC since the mid-1980s. In 1988, the company set up a \$60m Eurocommercial paper programme backed by the IFC.

The IFC said it expected its newly-merged securities and syndications unit to arrange more equity-linked transactions of this kind. Among the potential issuers are many of 136 Mexican companies privatised since President Carlos Salinas came to power in 1988.

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Heyman elected SEC's market watchdog

MR WILLIAM H. Heyman, a former top Wall Street executive, has been appointed head of the Securities and Exchange Commission's Market Regulation Division - officials said, AP-JD reports from New York.

Mr Heyman replaces Mr Richard Ketchum as top stock market watchdog for the SEC. He had joined the agency as Mr Ketchum's deputy in February. Before that, he was a managing director and head of arbitrage at Smith Barney, Harris Upham.

NEW INTERNATIONAL BOND ISSUES

| Borrower | Amount in \$m | Coupon % | Price | Maturity | Lead | Book runner |
|----------------------------------|---------------|----------|-------|----------|---------|---------------------|
| US DOLLAR | | | | | | |
| Trigon Computers (US) | 100 | (8 1/2) | 100 | 2001 | 2 1/2 | Goldman Sachs |
| Trigon Computers (US) | 30 | 3 1/2 | 100 | 2001 | 2 1/2 | Nomura Int. |
| STERLING | | | | | | |
| Bradford & Bingley Bldg Soc (UK) | 100 | (6) | 100 | 1995 | 56/40bp | UBS Phillips & Drew |

FT-ACTUARIES SHARE INDICES

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| EQUITY GROUPS & SUB-SECTIONS | | Monday May 20 1991 | | | | | | | | | | | |
|--|----------------------------------|--------------------|----------------|-------------------------|----------------------------|----------------|---------------|-------------------|---------------|----------------|---------------|----------------|-------------------|
| Figures in parentheses show number of stocks per section | | Index No. | Day's Change % | Est. Earnings (p/Share) | Gross Div. Yield (p/Share) | Est. P/E Ratio | Vol. (M) | Adj. Vol. to date | Index No. | Index No. | Index No. | Index No. | Year ago (approx) |
| | | | | | | | | | Fri May 17 | Thu May 16 | Wed May 15 | Mon May 13 | Year ago (approx) |
| 1 | CAPITAL GOODS (186) | 826.29 | +0.2 | 11.32 | 5.88 | 10.94 | 15.76 | 824.48 | 831.36 | 827.68 | 867.52 | | |
| 2 | Building Materials (24) | 1082.91 | -0.1 | 10.67 | 5.73 | 11.52 | 22.01 | 1082.86 | 1100.57 | 1087.64 | 1078.44 | | |
| 3 | Contracting, Construction (31) | 1325.46 | -0.2 | 9.26 | 6.07 | 14.16 | 30.61 | 1324.76 | 1351.31 | 1334.97 | 1299.29 | | |
| 4 | Electricals (10) | 1292.74 | -0.1 | 10.53 | 5.87 | 14.43 | 61.89 | 1292.37 | 1299.43 | 1297.00 | 1266.10 | | |
| 5 | Electronics (25) | 1748.76 | +0.7 | 8.96 | 5.13 | 14.07 | 7.81 | 1736.99 | 1746.77 | 1746.88 | 1814.64 | | |
| 6 | Engineering-Aerospace (6) | 428.45 | +0.1 | 16.29 | 5.85 | 7.39 | 10.60 | 428.09 | 434.77 | 433.98 | 462.70 | | |
| 7 | Engineering-General (47) | 435.73 | -0.1 | 12.93 | 6.03 | 9.35 | 8.43 | 435.69 | 438.87 | 437.82 | 474.08 | | |
| 8 | Metals and Metal Forming (8) | 447.84 | -0.2 | 11.95 | 7.71 | 6.13 | 448.33 | 451.68 | 452.02 | 481.66 | | | |
| 9 | Motors (13) | 322.27 | +0.3 | 12.54 | 7.54 | 9.42 | 9.89 | 321.25 | 324.30 | 323.60 | 341.13 | | |
| 10 | Other Industrial Materials (20) | 1474.88 | +0.4 | 9.61 | 5.51 | 12.24 | 31.84 | 1468.29 | 1479.56 | 1472.54 | 1588.52 | | |
| 11 | CONSUMER GROUP (167) | 1441.96 | +0.2 | 8.33 | 3.76 | 14.79 | 18.58 | 1439.32 | 1443.52 | 1442.46 | 1526.69 | | |
| 12 | Brewers and Distillers (22) | 1292.74 | -0.1 | 8.61 | 3.64 | 14.22 | 21.60 | 1295.90 | 1308.43 | 1299.09 | 1484.07 | | |
| 13 | Food Manufacturing (20) | 1153.26 | +0.1 | 10.00 | 4.26 | 12.33 | 18.39 | 1150.63 | 1159.18 | 1154.29 | 1277.47 | | |
| 14 | Food Retailing (14) | 2277.94 | -0.5 | 8.12 | 3.02 | 16.11 | 30.32 | 2272.11 | 2283.76 | 2282.77 | 2391.96 | | |
| 15 | Health and Household (21) | 2652.37 | +1.3 | 5.89 | 2.63 | 19.40 | 29.05 | 2620.17 | 2630.34 | 2634.60 | 2597.71 | | |
| 16 | Hotels and Leisure (23) | 1441.96 | +0.3 | 10.33 | 5.27 | 11.21 | 13.51 | 1312.11 | 1314.94 | 1314.94 | 1403.42 | | |
| 17 | Media (26) | 1440.87 | -0.1 | 9.90 | 4.84 | 13.42 | 22.11 | 1442.68 | 1454.74 | 1459.83 | 1581.00 | | |
| 18 | Packaging, Paper & Printing (16) | 658.11 | -0.1 | 8.23 | 5.01 | 15.21 | 11.81 | 658.99 | 666.26 | 659.07 | 677.98 | | |
| 19 | Stores (33) | 892.17 | -0.6 | 9.00 | 4.08 | 14.49 | 12.50 | 891.86 | 908.82 | 903.03 | 977.08 | | |
| 20 | Textiles (10) | 1292.74 | -0.6 | 10.53 | 5.86 | 12.75 | 9.55 | 1296.30 | 1307.14 | 1308.06 | 1388.35 | | |
| 21 | OTHER GROUPS (168) | 1220.05 | +0.6 | 9.47 | 4.90 | 12.70 | 13.16 | 1213.03 | 1222.42 | 1215.93 | 1139.35 | | |
| 22 | Business Services (13) | 1222.92 | +0.7 | 10.90 | 5.33 | 11.28 | 12.12 | 1222.02 | 1226.45 | 1222.06 | 1212.06 | | |
| 23 | Chemicals (21) | 1339.00 | -1.1 | 8.64 | 5.34 | 13.37 | 28.71 | 1333.46 | 1373.52 | 1340.06 | 1242.30 | | |
| 24 | Conglomerates (10) | 1292.77 | -0.2 | 10.26 | 6.99 | 11.76 | 17.49 | 1289.20 | 1310.30 | 1312.09 | 1411.55 | | |
| 25 | Transport (14) | 1292.77 | -0.2 | 10.26 | 6.99 | 11.76 | 17.49 | 1289.20 | 1310.30 | 1312.09 | 1411.55 | | |
| 26 | Electricity (14) | 1292.77 | -0.2 | 10.26 | 6.99 | 11.76 | 17.49 | 1289.20 | 1310.30 | 1312.09 | 1411.55 | | |
| 27 | Telephone Networks (4) | 1292.77 | -0.2 | 10.26 | 6.99 | 11.76 | 17.49 | 1289.20 | 1310.30 | 1312.09 | 1411.55 | | |
| 28 | Water (10) | 1292.77 | -0.2 | 10.26 | 6.99 | 11.76 | 17.49 | 1289.20 | 1310.30 | 1312.09 | 1411.55 | | |
| 29 | Other Industrial (22) | 1474.89 | +0.5 | 6.28 | 4.29 | 13.27 | 21.86 | 1475.25 | 1488.21 | 1477.21 | 1588.52 | | |
| 30 | Oil & Gas (19) | 2348.53 | +0.1 | 10.72 | 5.67 | 12.15 | 15.77 | 2324.81 | 2329.94 | 2327.34 | 2263.27 | | |
| 31 | 500 SHARE INDEX (500) | 1318.55 | +0.4 | 9.53 | 4.71 | 13.00 | 18.15 | 1313.60 | 1318.09 | 1316.63 | 1290.45 | | |
| 32 | FINANCIAL GROUP (97) | 796.10 | -0.1 | - | 5.95 | - | 18.07 | 795.33 | 804.22 | 797.61 | 783.27 | | |
| 33 | Banks (9) | 880.13 | -0.2 | 7.06 | 6.29 | 18.45 | 22.63 | 881.61 | 891.69 | 887.52 | 834.50 | | |
| 34 | Insurance (Life) (7) | 1460.85 | -0.1 | 5.67 | - | - | 11.64 | 1461.57 | 1479.56 | 1460.18 | 1524.20 | | |
| 35 | Insurance (Corporate) (6) | 672.41 | +0.3 | 6.52 | 6.52 | - | 6.52 | 672.41 | 672.41 | 672.41 | 687.89 | | |
| 36 | Insurance (Reinsurers) (6) | 1062.36 | +0.5 | 7.29 | 6.21 | 17.86 | 21.47 | 1074.92 | 1096.37 | 1080.52 | 1054.62 | | |
| 37 | Merchant Banks (7) | 426.26 | - | - | 4.75 | - | 4.47 | 426.48 | 429.77 | 423.26 | 432.50 | | |
| 38 | Property (40) | 982.36 | +0.5 | 6.61 | 4.77 | 20.75 | 7.90 | 977.31 | 986.40 | 980.47 | 1070.57 | | |
| 39 | Other Financial (2) | 264.55 | -0.2 | 2.25 | - | - | 2.25 | 264.55 | 264.55 | 264.55 | 264.55 | | |
| 40 | Investment Trusts (70) | 1203.50 | +0.4 | - | 3.48 | - | 15.60 | 1198.77 | 1205.86 | 1205.08 | 1184.32 | | |
| 41 | ALL-SHARE INDEX (657) | 1192.35 | +0.4 | - | 4.85 | - | 11.11 | 1198.02 | 1196.91 | 1190.82 | 1122.54 | | |
| 42 | Index No. | Index | Day's Change | Day's High (p) | Day's Low (p) | Day's High (p) | Day's Low (p) | Day's High (p) | Day's Low (p) | Day's High (p) | Day's Low (p) | Day's High (p) | Day's Low (p) |
| FT-SE 100 SHARE INDEX | 2466.61 | +12.7 | 2467.11 | 2462.9 | 2453.9 | 2471.9 | 2469.4 | 2463.7 | 2466.6 | 2466.6 | 2282.1 | | |

FIXED INTEREST

| PRICE INDICES | Mon May 20 | Day's Change | Fri May 17 | Accrued Interest to date |
|----------------------|------------|--------------|------------|--------------------------|
| British Government | | | | |
| 1 Up to 5 years (28) | 121.20 | +0.09 | 121.09 | 2.05 |
| 2 5-15 years (29) | 130.28 | +0.24 | 129.97 | 2.36 |
| 3 Over 15 years (18) | 136.56 | +0.30 | 136.16 | 5.02 |
| 4 Irredeemables (6) | 148.97 | +0.21 | 148.66 | 0.78 |
| 5 All stocks (70) | 129.59 | +0.19 | 129.34 | 2.23 |
| Index-linked | | | | |
| 6 Up to 5 years (11) | 158.83 | - | 158.82 | 0.05 |
| 7 Over 5 years (10) | 146.85 | +0.04 | 146.79 | 0.91 |
| 8 All stocks (11) | 147.73 | +0.04 | 147.69 | 0.88 |
| 9 Bels & Loans (5) | 109.36 | +0.10 | 109.09 | 1.96 |

AVERAGE GROSS REDEMPTION YIELDS

UK COMPANY NEWS

Survival depends upon successful outcome to refinancing talks
Brent Walker to put plan to banks

By Maggie Orry

THE ENORMITY of the task facing Brent Walker and its bankers became clearer yesterday with the publication of results for 1990 and a year-end balance sheet.

Net assets had dwindled to £139m, and the notes to the accounts suggest that even this would disappear if the group's properties were sold in a disorderly fashion.

The company said that its ability to operate as a going concern was dependent upon successful talks with its banks and "the continued provision of adequate short-term finance by the group's bankers until the financial restructuring has been agreed".

Brent Walker is putting its business plan to the steering committee of its 60 or so banks today. The committee, headed by Standard Chartered Bank, will consider the plan and if it decides to accept it will put it to the other lenders.

The balance sheet showed Brent Walker owed its banks a net £12m at the end of December. However, this has risen since as the group's trading profits have not covered interest charges. The banks must decide whether to let Brent Walker make a £6.6m interest payment on Thursday due on its £101.9m of convertible bonds. The bondholders rank below the banks in the hierarchy of creditors.

The leisure group, of which Mr George Walker is chief executive and largest shareholder, turned in a rise in operating profits for 1990, to £122.2m (£112.5m). However, the gain was greater at the interim stage when operating profits were reported at £93.1m against £49.1m.

A large part of the increase came from the purchase of the William Hill betting shop chain in December 1989. This contributed for only a couple of weeks

in the 1989 figures. Operating profits from betting in 1990 were £57.1m (£53.8m). All the divisions increased operating profits. Hotels, leisure and related activities made £15.1m (£13.6m); brewing, wines and spirits contributed £20m (£18.4m) and leisure developments made £34.8m (£32.9m). There were no property profits compared to a £30.3m gain in 1989. Profits from businesses sold were £3.4m (£3.7m).

The group's problems stem from its high level of debt and the fall in the property market. Its gross interest charge was £196m (£224.2m) but was cut to a net figure of £116.2m (£44.1m) by capitalising some interest and including other amounts under exceptional and extraordinary items.

Exceptional items included £16m of costs relating to the group's refinancing last November, with another

£24.1m written off against investment and development properties. The company has also written off £15.3m of advance corporation tax.

Below the line, extraordinary debits of £301.7m (credits of £52.5m) related to the write down of properties which are due to be sold and losses taken on sales completed. These included a £118.1m loss against the group's media interests and £73.5m against hotels, leisure and related activities. The extraordinary costs included £3.7m related to the £101.9m convertible bond issue last November.

The balance sheet includes as debt the £50m owed to Grand Metropolitan as the final instalment of the £585m purchase of the William Hill chain. Brent Walker is still disputing the purchase price, which it thinks should have been £213m lower.

See Lex

Midland not to sell its Thos Cook travel chain

By David Churchill, Leisure Industries Correspondent

THOMAS COOK, the travel agency owned by Midland Bank has told its 1,300 staff that it is no longer up for sale.

Mr John Donaldson, Cook's chief executive, has written to the 1,300 staff saying that Midland has decided not to sell the travel chain.

The move follows months of speculation that Cook it would be sold to ease Midland's financial problems. The bank cut its dividend in February after announcing pre-tax profits of only £11m for 1990 and has attempted to dispose of several subsidiaries, including Forward Trust, its finance house.

Thomas Cook, one of the group's strongest performers, was not formally placed on the market but Midland is understood to have received several firm offers but none that met its asking price.

The decision appears to have been taken by Mr Brian Pearce, the new chief executive who arrived from Barclays in the wake of the announcement of Midland's 1990 results.

In 1990 Cook's pre-tax profits were £28m on turnover of £270m. It has 394 shops in the UK and 1,500 in Europe.

Disposal to cut debt at Systems Reliability

By Roland Rudd

Systems Reliability Holdings, the computer systems manufacturer and telephone systems designer, yesterday announced a £18m management buy-out of its telecommunications and information technology businesses.

The group also reported a fall in pre-tax profits from £7.6m to £7.3m for the year to end-December. Turnover was up from £124.5m to £133.1m.

The sale will strengthen the holding company's balance sheet by reducing its £12m debt by £8.5m. The group is to focus on its core activities.

The £18m management buy-out of 1.5p raises the total to 2.5p (£2.5p). It is covered almost three times by earnings per share of 7.4p (£7.4p).

Sedgwick first quarter static at £42.6m despite cost cuts

By Clara Pearson

SEDGWICK, the international insurance group which enforced swingeing cost cuts last year, has announced static profits for the first quarter.

The pre-tax figure for the three months to the end of March came out at £42.6m against £42.5m last year.

This result came after Sedgwick had already reported sharply lower pre-tax profits of £38.3m for the full year after £21.4m exceptional charges for redundancies and closures, especially in the US.

Commenting on the first three months, Mr David Rowland, chairman, warned that insurance markets were continuing to be soft.

However, he pointed to a two per cent reduction in expenses

at constant exchange rates in the first quarter. This, he said, was evidence of the benefits of Sedgwick's long-term cost-cutting programme coming through.

He said that last year's heavy cuts in its US operations allowed Sedgwick to show an improvement in trading on last year during the first quarter.

Mr Rowland added that the current strength of the dollar was an encouraging factor.

With some 60 per cent of revenues in dollars, the weakness in the US unit against sterling during the first quarter, compared with the comparable 1990 period, had had a significant adverse impact.

Without taking into account exchange rate changes, revenues for the quarter were £133.3m (£127.3m) and expenses £138.9m (£132.1m). Operating income provided £109.2m (£109.8m) of revenues and interest, also at £117.5m.

Sedgwick Broking Services was beginning to benefit from an "initial hardening" in some parts of the marine market. Meanwhile, premium rates for standard risk in North American and most other insurance markets had not increased, although in London increases had occurred in certain specialised areas.

Earnings per share for the first quarter worked through at 8.5p (8.4p).

Recession-hit Prowling more than halved at £7.5m

By Andrew Bolger

PROWLING, the Midlands-based housebuilder which concentrates on the south-east of England, blamed the industry's unprecedented recession for a "disappointing" drop in pre-tax profits from £16.1m to £7.5m in the year to February 28.

The number of houses sold fell only slightly from 307 to 296, with the average selling price down from £141,000 to £120,000. This reduction resulted from lower prices and a change in the group's mix towards smaller, higher-density houses.

Prowling said: "We have a continuing policy of trying to maximise margins rather than sales volumes in order to reap the best advantage from our valuable land bank."

Turnover fell 35 per cent to £40.8m (£62.9m), reflecting not only the lower prices, but also a reduction in the amount of surplus, undeveloped land sold.

Earnings per share fell from 16.3p to 6.5p. A final dividend of 3.5p maintains the total at 4.5p.

Prowling said that at the year-end it controlled some 5,500 plots with planning permission or zoned for residential use, an increase of 100 plots since the previous year. The forward

land bank, on which the company hopes to obtain permission, stood at 3,500 potential plots.

Mr Terry Rowdon, chief executive, said: "There is light at the end of the tunnel, although much will depend on the timing and the pace of recovery in the UK housing market."

COMMENT

Prowling's focus on the south-east means it felt the full force of the recession, but the family-controlled company has also benefited from hopes that lower interest rates will enable housebuilding to bounce back.

Volumes will no doubt improve, but results will be restrained in the short term by continuing pressure on margins and the group's move towards cheaper houses. The company is favoured by institutions because of its land bank, probably the best in the business. The catch is that this quality and the group's strong medium-term prospects are now more than reflected in the price of the tightly-traded shares. Forecasts of a modest 28.5m pre-tax puts the shares, down 5p yesterday to 17.5p, on a hairy prospective multiple of 10.

It is betting on an end to housing market gloom.

Ferromet joins dividend list despite 55% decline

By Roland Rudd

FERROMET GROUP, a supplier of raw materials from the US to the stainless steel industry in Europe and south-east Asia, is to pay a maiden dividend despite a 55 per cent drop in taxable profits for 1990.

The USM-quoted company blamed the recession on both sides of the Atlantic for the drop from £1.38m to £224.218 in pre-tax profits. Turnover fell by some 27 per cent to £48.29m. The comparative figures covered a nine-month period.

Mr Roger Wain, chairman, said the group was also affected by the weak dollar and the Gulf war. "During the last quarter business between the US and Korea came to a grinding halt," he added.

Despite the disappointing result, the group is to pay a dividend, a nominal 0.05p, for the first time in its seven year history.

Mr Wain said he had promised shareholders last year that the company intended to pay a dividend. He hopes to pay a bigger dividend by the end of the current year.

The group changed its name from Cogan Group in 1989 when it acquired Ferromet Resources, the US scrap metal company. The American business was subsequently strengthened with the acquisition of a deep water facility in Alabama.

A joint venture with Westgold, part of the Minorco Group, is studying whether it is financially feasible to mine a geological reserve of 5.5m tonnes at 0.0338 gold per tonne. Borrowings have risen from £12m to £18m. Mr Wain said the increase was due to the cyclical nature of the trading business.

The dividend is covered 3.4 times by earnings per share of 0.17p (0.57p).

COMMENT

Shareholders expect dividends. So last year Mr Wain told them what they wanted to hear: Ferromet would be paying its first dividend when it reported its 1990 year-end results. Nothing wrong in that. The only problem was that the dividend was made before the fall in the value of the dollar, and more importantly the start of the Gulf war. But a promise is a promise and so the group decided to pay out a nominal dividend and hopes to increase the distribution by the end of the current year. But this time the chairman is wisely refraining from promising anything.

The market expects a slight increase in profits, putting the shares on a prospective multiple of 10. Investors looking for a substantial dividend are likely to be disappointed.

DIVIDENDS ANNOUNCED

| | Current payment | Date of payment | Covers - pending dividend | Total for year | Total last year |
|---------------------|-----------------|-----------------|---------------------------|----------------|-----------------|
| Assoc Brl Foods | 8.5p | Sept 2 | 7.7 | 12.2 | 11 |
| Brent Walker | nil | nil | 10 | 5 | 15 |
| Ferromet | 0.05 | June 28 | 0.05 | 0.05 | 0.05 |
| Goldsmiths | 1.5 | Sept 2 | 1.4 | 3 | 1.4 |
| Helle Horne | nil | nil | 4 | 1 | 8 |
| Prowling | 3.3 | July 22 | 3.3 | 2.5 | 2.25 |
| Systems Reliability | 1.5p | June 27 | 1.5 | 6 | 12.5 |
| Therale | 3 | June 27 | 5.5 | 6 | 12.5 |

Dividends shown pence per share net except where otherwise stated. *Equivalent after allowing for scrip issue. *On capital increased by rights and/or acquisition issues. *USM stock. *Second interim for 8-month period to September 14.

BOARD MEETINGS

| | Chairman | Date |
|---------------------|----------------|--------|
| Assoc Brl Foods | John Thornhill | June 4 |
| Brent Walker | John Thornhill | May 22 |
| Ferromet | John Thornhill | May 28 |
| Goldsmiths | John Thornhill | May 28 |
| Helle Horne | John Thornhill | May 28 |
| Prowling | John Thornhill | May 28 |
| Systems Reliability | John Thornhill | May 28 |
| Therale | John Thornhill | May 28 |

GLOBAL GOVERNMENT PLUS FUND LIMITED

International Depositary Receipts representing 100 common shares

OFFER TO PURCHASE

The Board of Directors of Global Government Plus Fund Limited authorised on April 28, 1991 an offer to purchase to 25% of the Company's issued and outstanding common shares (the offer). The offer will be made by the Company to its registered holders of its common shares in accordance with the terms of the Company's bye-laws. Under the terms and conditions of the offer, a shareholder wishing to accept the offer shall be required to tender all of his shares. The purchase price payable for each common share tendered and accepted by the Company for payment will be the net asset value of the Company on June 19, 1991 divided by the total number of issued and outstanding common shares.

The offer will be made conditional upon, among other things, the Company's ability to liquidate its portfolio securities in an orderly manner and consistent with the Company's investment policies and objectives in order to finance the purchase of the shares. If more than 25% of the issued and outstanding shares are validly tendered under the offer, the Company will purchase only 25% of the shares on a pro-rata basis (disproportionate fractions) in accordance with the number of shares tendered by each shareholder.

IDR-holders who wish to sell their shares under this offer must:

- 1) deliver the IDRs with coupon number 35 attached, to Morgan Guaranty Trust Company of New York at the address indicated below, by May 27th, 1991 and
- 2) send the following to the same address by May 27th, 1991:

- 2.1 a certification in the form imposed by the Company available at the address indicated below, completed and signed by the beneficial owner of the IDRs, declaring the owner is tendering all his shares and not less than all for purchase;
- 2.2 an instruction containing all of the following items:
- 2.2.1 an indication of the identity of the beneficial owner
- 2.2.2 payment instructions for the US\$ proceeds of the purchase
- 2.2.3 registration and delivery instructions for shares not purchased by the Company if the Company only purchases shares on a pro-rata basis as described above;

Although IDR coupon number 34 will only be payable on June 7th, 1991 IDR-holders accepting the offer will be entitled to this dividend. If the shares are accepted for purchase, a service charge of US\$ 25 due to the Company, an IDR cancellation fee of US\$ 10 per IDR and the expenses incurred by Morgan, Brussels, will be deducted from the proceeds.

MORGAN GUARANTY TRUST COMPANY OF NEW YORK
35 Avenue des Arts, 1040 Brussels
as Depositary

Goldsmiths dives sharply to £2m

GOLDSMITHS GROUP, the jewellery chain, reported a sharp fall in pre-tax profits from £4.06m to £1.9m in its first year as a public company, writes John Thornhill.

The recession, poll tax and the high level of interest rates were held to blame. In the 12 months to March 2, sales grew from £39.58m to £41.46m but higher costs reduced operating profits to £4.75m (£5.32m).

Mr Jurek Piasicki, chairman and chief executive, said the tough trading conditions began to have an adverse impact on the business from June onwards and coincided with some big price increases from its watch suppliers.

A final dividend of 1.5p will bring the total maiden dividend to 3p.

COMMENT

Goldsmiths Group has had a tough time since it returned to the market via an offer for sale a little more than a year ago. The high street recession has deepened since then and the company's share price has consistently headed south from its original flotation price of 150p. The company is taking a bleak view of current trading prospects - rightly so in the light of yesterday's dispiriting retail sales figures from the Central

Statistical Office - and there seems little hope of an early recovery in the shares either. This year, Goldsmiths will do well to maintain profits at last year's level; the weaker trading should be offset by the company's strenuous efforts to cut costs, but earnings will improve marginally due to a improved tax position giving a prospective multiple of 8. The shares are underpinned by a reasonable dividend yield and have little further downside. They are unlikely, however, to move ahead greatly from yesterday's closing price of 50p, until there is a roster glow on the high street.

S&U STORES PLC

"The growth in our Financial Services Division, in particular, has reflected the larger unsecured loan facilities which are now available to our higher income customers and we expect this trend to continue."

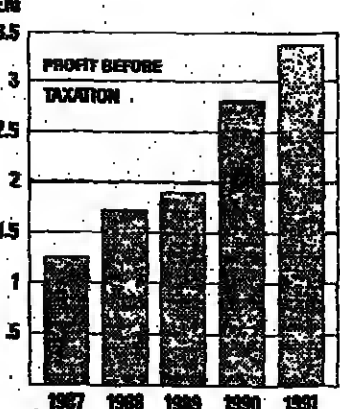
Derek Coombs - Chairman

The following are extracts from the circulated statement of the Chairman

- * The results for the year to 31 January 1991 show pre-tax profits increased from £2.8m to £3.4m on a turnover of £46.3m.
- * Earnings per share rose from 17.80p to 21.53p.
- * A final dividend of 6p is recommended (1990: 4.5p) making 8p for the full year (1990: 6p).
- * Once again this performance has been achieved through internal growth without acquisition.
- * The quality of our credit is very closely controlled and is fundamental to the sound development of our business.
- * It is too early to give forecasts for 1991/1992, particularly in these recessionary times, but we believe shareholders will not be disappointed.

From the 1991 Annual Report

- * PRE-TAX PROFITS UP 22.5% TO £3.4m
- * DIVIDEND UP 33%
- * EARNINGS PER SHARE UP 21%



For a copy of the 1991 Annual Report & Accounts write to:
The Secretary, S&U Stores PLC, 51/53 Edgbaston Street, Birmingham B5 4QR

AEGON Insurance Group

AEGON N.V., registered offices at The Hague, The Netherlands

At the Annual General Meeting of Shareholders held on May 16, 1991, the dividend for the 1990 financial year was fixed at Dfl. 2.10 in cash per Ordinary Share of Dfl. 5.00 nominal value - already made payable as interim dividend - and a final dividend that amounts to Dfl. 5.00 per Ordinary Share.

The final dividend may at the option of the shareholder be taken entirely in cash or Dfl. 1.25 in cash and nominal Dfl. 3.75 in new shares, chargeable to the tax free paid-in surplus or if so required out of 1990 net income.

Except for holders of New York shares, the final dividend will be payable from May 30, 1991 at the head offices of:

Amsterdam-Rotterdam Bank N.V., Algemene Bank Nederland N.V., Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A., NMB Postbank Groep N.V., Pison, Holding & Pison N.V., Bank Mees & Hope N.V., Kredietbank N.V., Brussels, Kredietbank S.A., Luxembourg, Belpar, Luxembourg, Schweizerische Bankverein, Schweizerische Kreditanstalt, Schweizerische Bankgesellschaft, Zürich, Basel and Geneva, Deutsche Bank Aktiengesellschaft, Düsseldorf, J. Henry Schroder Wagg & Co. Ltd., London.

For shareholders wishing the dividend totally in cash, dividend coupon no. 28 will pay Dfl. 1.25, no. 29 will pay Dfl. 2.85, and no. 30 will pay Dfl. 1.07 after deduction of 25% dividend tax.

Shareholders of Ordinary Shares who opt for payment in shares will receive one new Ordinary Share of Dfl. 5.00 upon surrender of dividend coupon nos. 28 or 30 from 40, or from 100 Ordinary Shares, respectively, which new shares will participate fully in the results for 1991 and subsequent years. Dividend coupons nos. 28 and 30 rank pari passu.

After June 28, 1991, the final dividend is only payable in cash. Coupons should be surrendered to N.V. Nederlandsche Administratie van Trustantoor, N.Z. Voorburgwal 326-328, 1012 RW Amsterdam, The Netherlands.

The published rates of commission will be paid to members of the Amsterdam Stock Exchange to enable them to exchange dividend coupon nos. 28 and 30 without charging commission to shareholders. In the case of Ordinary Shares, the rates of commission will be made available to holders of CF Certificates through the intermediary of the institutions acting as custodians of the coupon sheets to their shares at the close of business on May 16, 1991.

Shareholders requesting their bank to accept/release securities in connection with the surrender of coupons will be charged the usual standard fee for deposit/withdrawal according to the schedule of charges of the Association of Netherlands Bankers (Nederlandse Bankiersvereniging).

The Executive Board

The Hague, May 16, 1991
50 Marijkevoelen**TOPS SERIES II LIMITED**

(Incorporated with limited liability in the Cayman Islands)

U.S. \$100,000,000

Series II Amortising Floating Rate Trust Obligation

Participation Securities due 1992

Secured by a Charge on a Portfolio of Fixed Rate Bonds

and Notes with an aggregate principal amount of

U.S. \$125,000,000

For the period 20th May, 1991 to 19th August, 1991, the securities

will carry an interest rate of 6% per annum with an interest

amount of U.S. \$3,666.51 per U.S. \$250,000 (original principal

amount) and U.S. \$7,333.03 per U.S. \$500,000 (original principal

amount) payable on 19th August, 1991.

Listed on the Luxembourg Stock Exchange

Bankers Trust Company, London

Agent Bank

FIRST AUSTRALIA PRIME INCOME INVESTMENT COMPANY LIMITED

International Depositary Receipts representing 100 common shares

OFFER TO PURCHASE

The Board of Directors of First Australia Prime Income Investment Company Limited authorised on April 28, 1991 an offer to purchase to 25% of the Company's issued and outstanding common shares (the offer). The offer will be made by the Company to its registered holders of its common shares in accordance with the terms of the Company's bye-laws. Under the terms and conditions of the offer, a shareholder wishing to accept the offer shall be required to tender all of his shares. The purchase price payable for each common share tendered and accepted by the Company for payment will be the net asset value of the Company on June 19, 1991 divided by the total number of issued and outstanding common shares.

The offer will be made conditional upon, among other things, the Company's ability to liquidate its portfolio securities in an orderly manner and consistent with the Company's investment policies and objectives in order to finance the purchase of the shares. If more than 25% of the issued and outstanding shares are validly tendered under the offer, the Company will purchase only 25% of the shares on a pro-rata basis (disproportionate fractions) in accordance with the number of shares tendered by each shareholder.

IDR-holders who wish to sell their shares under this offer must:

- 1) deliver the IDRs with coupon number 35 attached, to Morgan Guaranty Trust Company of New York at the address indicated below, by May 27th, 1991 and
- 2) send the following to the same address by May 27th, 1991:

- 2.1 a certification in the form imposed by the Company available at the address indicated below, completed and signed by the beneficial owner of the IDRs, declaring the owner is tendering all his shares and not less than all for purchase;
- 2.2 an instruction containing all of the following items:
- 2.2.1 an indication of the identity of the beneficial owner
- 2.2.2 payment instructions for the US\$ proceeds of the purchase
- 2.2.3 registration and delivery instructions for shares not purchased by the Company if the Company only purchases shares on a pro-rata basis as described above;

Although IDR coupon number 34 will only be payable on June 7th, 1991 IDR-holders accepting the offer will be entitled to this dividend. If the shares are accepted for purchase, a service charge of US\$ 25 due to the Company, an IDR cancellation fee of US\$ 10 per IDR and the expenses incurred by Morgan, Brussels, will be deducted from the proceeds.

MORGAN GUARANTY TRUST COMPANY OF NEW YORK
35 Avenue des Arts, 1040 Brussels
as Depositary

UK COMPANY NEWS

Andrew Taylor and Charles Leadbeater on the political reaction to Hanson's stake in ICI while Diane Summers gives the unions' views

MPs unite in opposition to possible bid

LABOUR AND Conservative MPs with Imperial Chemical Industries plants in their constituencies yesterday warned that a bid for the company by Hanson, the acquisitive conglomerate, would face mounting political opposition.

The response confirms that the government would face considerable pressure from its own supporters to make sure ICI was not broken up by Hanson, which last week acquired a 2.8 per cent stake.

As the map, right, shows, the spread of ICI's involvement in the UK economy gives it a considerable political significance.

The company has a UK workforce of 53,000 employed at more than 70 sites throughout the country, 32 of which employ 200 or more people. Its activities directly affect more than 40 Parliamentary constituencies, some of them Conservative marginals.

In the next few weeks much could turn on how the two companies marshal their political resources.

Mr Nicholas Winterton, Conservative MP for Macclesfield, where ICI employs about 1,700 people, said: "I am absolutely appalled at the prospect of a bid for ICI. I cannot see that Hanson can do anything for ICI that ICI could not do for

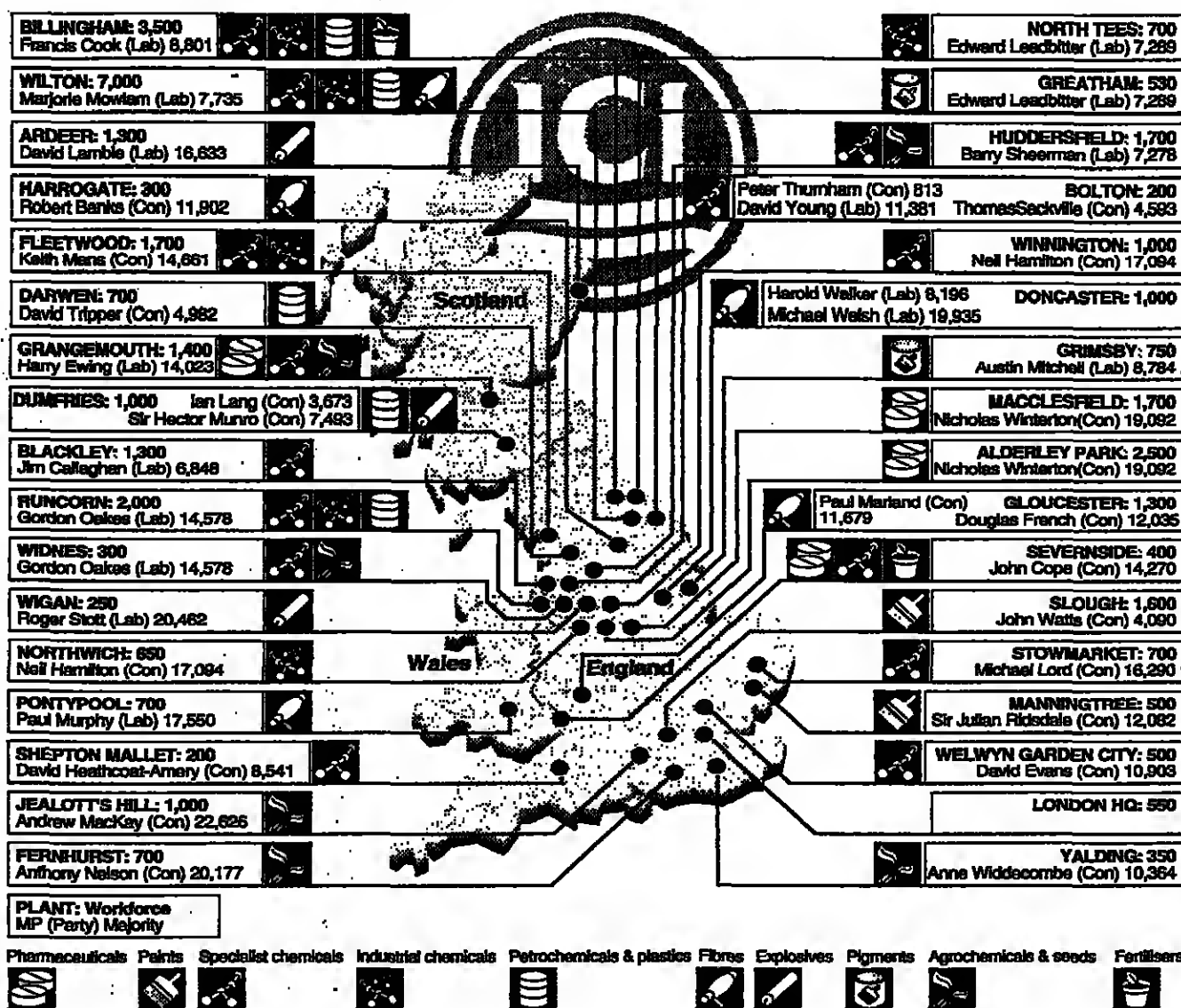
itself."

He added: "If a bid is made I will put pressure on my party and ministers to ensure it does not succeed."

Mr Douglas French, Conservative MP for Gloucester, who represents 90 per cent of the workers at ICI's plant in the city, said: "I view with some misgivings the possibility of control passing to Lord Hanson because, brilliant though he is, I do not think that his greatest abilities lie in the sustained management and progress of a company of ICI's type."

Mr Marjorie Mowlem, opposition spokesman on city and corporate affairs and MP for Redcar commented: "A bid by Hanson would be opposed by the people of Teesside on several levels. While some might criticise ICI on environmental grounds, Hanson's record is much worse and investment, particularly in research and development would suffer."

Mr Harry Ewing, Labour MP for Falkirk, whose constituency includes ICI's Grange-mouth complex said: "I am horrified at the thought of a takeover. ICI is a well managed company with good industrial relations. All that would be put at risk with a bid. The government could not stand by and see a national institution endangered."



Unions warn of fight on a scale never seen before

TRADE UNIONS at Imperial Chemical Industries yesterday launched what they claimed would be a campaign "on a scale never seen before" as a pre-emptive move to influence public opinion against any bid for the company from Hanson.

The first stage of the campaign will be to press the Office of Fair Trading for an investigation on the basis that a Hanson takeover would allegedly be against the public interest.

In addition the European Commission will be asked to start immediate investigations. The unions also threatened to exert any pressure they could through pension fund investors in the company.

Mr Fred Higgs, secretary of the union side representing 22,000 process and craft workers said: "We're confident that if Hanson decides to go ahead with a full-blown takeover he's going to discover he's bitten off more than he can chew."

The six unions - the TGWU and GMB general unions, AEU engineering union, EETPU electricians union, MSF general technical union and the construction union Ucutt - had a brief meeting with ICI management today to inform them of the campaign. The company said it would "watch with interest".

Any possible takeover would

be detrimental to the unions' members, the company and the long-term future of the whole company, said Mr Higgs. "It is our view that Hanson is a vandal of British industry," he added.

The unions feared that the component parts of the company would be sold for a quick return on Hanson's investment. There were particular fears for the pension fund. "On two occasions court action has had to be taken to prevent Hanson taking surpluses out of pension funds," said Mr Higgs.

The ICI unions were yesterday due to meet representatives of other unions at the Trades Union Congress to discuss the issue. An early meeting is also being sought with Labour's front bench trade and industry team.

In a further move the unions intend contacting members of the European Parliament and local councils, in which the company's plants, numbering more than 70, are situated.

Separately, blue collar unions yesterday indicated that they were likely to reject a 6.4 per cent pay offer from the company. The increase, which would take effect from June 1, would be in addition to a 14 per cent rise and a cut in the working week at present on offer in exchange for an improvement in working practices.

Boddington questions Devenish asset value

By Philip Rawstorne

BODDINGTON, the pubs, hotels and health-care group, yesterday questioned the bid for JA Devenish by claiming the west country brewer had significantly overvalued its assets.

Mr Denis Cassidy, Boddington's chairman, said in a letter to Devenish shareholders that the company's fully diluted net assets amounted to little more than 200p per share.

A review of Devenish's pub estate by a firm of chartered surveyors suggested that it was worth £20m less than the reported net book value of £147m, he said.

A book value of £19.5m for the loss-making Redruth brewery, which might have to be closed, was also questionable, Devenish said in its defence document earlier this month that its net asset value was 272p per share.

Boddington's 10-for-7 share

exchange offer values Devenish at 214p per share. There is a cash alternative of 210p.

Mr Cassidy, whose letter also attacked Devenish's "dismal profit record and prospects", yesterday questioned the credibility of any forecast for 1991 that the company might include in information it has promised shareholders.

"Devenish's dependence on the summer holiday trade would make it not so much a profit forecast as a weather forecast," he added.

Mr Michael Cannon, chairman and chief executive of Devenish, said yesterday that Boddington's views were "totally lacking in merit".

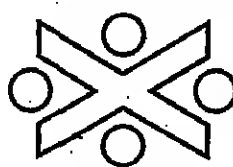
He added that Mr Cassidy's letter was "full of conjecture and supposition" and reflected Boddington's fear that it would not be able to afford the price necessary to gain control of Devenish.

FINANCIAL NEWS FROM BANK OF SCOTLAND

Bank of Scotland Annual Results

| | 1991 | 1990 |
|---|----------|----------|
| OPERATING PROFIT BEFORE BAD DEBT PROVISIONS | £339.4m | £305.4m |
| PROFIT BEFORE TAXATION | £134.1m | £193.5m |
| TOTAL CAPITAL RESOURCES | £1,707m | £1,538m |
| TOTAL ASSETS | £22,095m | £18,394m |
| EARNINGS PER ORDINARY STOCK UNIT | 9.5p | 14.3p |
| DIVIDEND PER ORDINARY STOCK UNIT | 5.1p | 4.55p |

- Operating Profit continuing to grow – up 11 per cent on 1990.
- Profit before taxation down to £134.1 million as a result of increased bad debt provisions.
- Net ordinary dividend for the year increased by 12 per cent to 5.1 pence.
- Cost : income ratio – a satisfactory 54.6 per cent.
- Current trends and improving margins give confidence for a Rights Issue to raise an additional £194 million of Tier 1 equity capital.



BANK OF SCOTLAND

A FRIEND FOR LIFE

For a copy of the Bank's Annual Report contact the Public Affairs Department, Bank of Scotland, PO Box 725, Orchard Brae House, 30 Queensferry Road, Edinburgh EH4 2UH. Telephone 031 343 7070.

To the Holders of
SHEARSON LEHMAN CMO, INC.

Series F, Class F-1 Floating Rate Bonds
Due February 20, 2018

Pursuant to the Indenture dated as of February 1, 1985 between Shearson Lehman CMO, Inc. as Issuer and Texas Commerce Bank as Trustee, notice is hereby given that the interest rate applicable to the above Bonds for the interest period May 20, 1991 through August 19, 1991 as determined in accordance with the applicable provisions of the Indenture, is 6.6875% per annum. Amount of interest payable is \$116,623,066.63 per \$30,000 principal amount.

SHEARSON LEHMAN CMO, INC.

NORV & SIME ATLAS FUND
Société d'investissement à capital variable
Registered office 13 rue Goethe L-1637 Luxembourg
R.C. Luxembourg: B-27 229

EXTRAORDINARY GENERAL MEETING

The shareholders are hereby convened to attend an Extraordinary General Meeting to be held at the registered office of the Company at 10.00 a.m. on 30th May, 1991 with the following agenda:

1. To amend article 27 of the Articles of Incorporation of the Company (the "Articles") in order to amend paragraph 2 as follows:

"Shareholders may also include any sums taken from the net assets of the Company provided, however, that the relevant capital of the Company, as determined by article 6, paragraph 2 of the Articles, will be observed at any time."

2. Miscellaneous.

At a first meeting decisions shall require a quorum of not less than one half of the shares outstanding and a majority of two thirds of the shares present or represented at the meeting and voting.

The holders of bearer shares should deposit these at least five clear days before the meeting with one of the following Banks:

- Bank of Luxembourg S.A., 13, rue Goethe, L-1637 Luxembourg.
- The Bank of Commerce (Germany) Ltd., Beuville House, St. Julians Avenue, St. Peter Port, Guernsey, Channel Islands.

ANNUAL GENERAL MEETING

The shareholders are hereby convened to attend the Annual General Meeting to be held on 20th May, 1991 at 2.00 p.m. in accordance with article 10 of the Articles, unless the necessary quorum to validly decide on the agenda of the Extraordinary General Meeting of shareholders as above, cannot be met, in which case the Annual General Meeting of shareholders shall be held at the postponed date of 30th July, 1991 at 2.00 p.m. with a re-convened Extraordinary General Meeting of shareholders.

The Agenda of the Annual General Meeting of shareholders to be held on 30th May, 1991 or at the postponed date of 30th July, 1991, shall be as follows:

1. Report of the directors and of the auditors on the annual accounts as at 31st January, 1991
2. Approval of the balance sheet and profit and loss account as at 31st January, 1991
3. Decision on disposal of net results and/or utilisation of interim dividends
4. Discharge to be granted to the directors
5. Election and/or re-election of directors
6. Miscellaneous.

At the ordinary annual general meeting there shall be no quorum requirement and resolutions may be passed at a simple majority of the shares present or represented, subject always in the case of a dividend declaration, to a concurred simple majority of the votes expressed at a special class meeting of the relevant class.

By order of the Board of Directors,
Bank of Commerce (Germany) S.A.
Secretary

Associated British Foods

Second Interim Report

Following the change of date to which the financial accounts of the group are prepared, the Report and Accounts for 1991 will cover an eighteen month period to 14 September 1991.

| | 12 months to 30 March 1991* | 12 months to 31 March 1990 |
|---|-----------------------------|----------------------------|
| Turnover | 3,125.1 | 2,774.7 |
| Trading surplus | 188.9 | 159.3 |
| Interest payable | 23.4 | 7.0 |
| Group profit | 165.5 | 152.3 |
| Investment income | 151.9 | 131.5 |
| Profit on ordinary activities before tax | 317.4 | 283.8 |
| United Kingdom tax | 58.1 | 54.1 |
| Overseas tax | 43.1 | 36.6 |
| Profit on ordinary activities after tax | 216.2 | 193.1 |
| Minority interests | 5.8 | 5.5 |
| Profit on ordinary activities attributable to the company | 210.4 | 187.6 |
| Extraordinary items | (100.9) | 79.6 |
| Profit for the financial year | 109.5 | 267.2 |
| Ordinary dividends | | |
| 1st Interim | 16.6 | 14.7 |
| 2nd Interim | 38.1 | 34.6 |
| Earnings per share before extraordinary items | 46.9p | 41.9p |

*This year's figures unaudited.

The Chairman, Mr. GARRY WESTON, reports:

In spite of the continued heavy pressure on food manufacturing margins during the period under review, I am pleased to report increased profits for the group up 12 per cent to £317.4 million. This figure has been achieved after currency realignments which had the effect of reducing the earnings of our overseas subsidiaries by some £3.5 million. After providing for taxation of £101.2 million and minority interests of £5.8 million, earnings per ordinary share also increased by 12 per cent.

Once again, the lower margins achieved by the UK manufacturing divisions have been more than compensated for by the continued earnings growth of our overseas divisions, from the excellent growth in contributions during the year from the group's cash balances, and by the first time inclusion of earnings from new subsidiaries, principally British Sugar. These earnings totalled £33.2 million, which exceeded the cost of financing the acquisitions.

As shareholders have already been informed, British Sugar plc, was acquired on 2 January 1991, with the acquisition being financed partly out of our own cash balances and partly by bank borrowings. The closure of the two sugar factories announced in February 1991 was planned prior to acquisition, and the costs thereof, including the write down of assets employed to produce value, have been treated as fair value adjustments to the book value of the assets acquired at acquisition.

Group sales to customers for the twelve months increased by 13 per cent to £3,125.1 million. This includes some £170 million attributable to British Sugar and a reduction of £58 million resulting from currency realignments.

Our UK manufacturing divisions increased sales by £264 million to £1,676 million, and the retail companies by £46 million to £364 million. Excluding British Sugar, these reflect increases of 7 per cent and 15 per cent respectively.

The profit achieved by our UK manufacturing division is £110.1 million. After excluding the contribution from British Sugar, this shows a decrease of £12.7 million compared with last year, but this is after the heavy costs of some £12 million (1990 - £6.9 million) associated with the closure of three major bakeries as well as restructuring and redundancy costs to our other manufacturing companies, which in accordance with the group's normal practice, have been charged above the line.

As reported at the six month stage, the margins of our bakery operation continue to remain under pressure, affected by heavy competition and the lack of buoyancy in the bread markets, whilst the earnings reported by our milling division were below the record figures achieved the previous year. With the exception of our canning and ice cream

operations, all other manufacturing divisions show results in line with or better than budgets.

Our retail companies in the North of Ireland and this country together increased earnings to £10.1 million with our grocery companies in Ulster achieving an excellent turn-around, continuing to further increase sales whilst improving operating margins after the heavy pressures of the previous year.

Our overseas companies produced good results with sales at £1,085 million and trading profits of £68.7 million showing increases of £40 million and £7.9 million. After allowing for adverse currency movements, these are increases of 10 per cent and 19 per cent respectively. George Weston Foods in Australia increased sales and profits by 6 per cent and 15 per cent respectively.

Group investment income, net of interest payable, at £128.5 million is after financing the British Sugar acquisition and compares with earnings from this source of £124.5 million the previous year.

As indicated at the 1990 Annual General Meeting, we have reviewed the value of our investment in Berisford International. Accordingly the value has been written down by £100.9 million and has been dealt with as an extraordinary item.

Whilst Associated British Foods' performance to its new year end of 14 September 1991 will undoubtedly be adversely affected by continued pressure on manufacturing margins and the lower interest earnings on reduced cash balances, we believe that this will be more than compensated for by earnings from elsewhere in the Group and the contribution that will be made from a full six months by British Sugar.

At a Board Meeting today, the directors declared a second interim dividend of 3.5p per share (1990 - 7.7p) which, together with the associated tax credit, is equivalent to 11.33p per share (1990 - 10.27p). This interim dividend will be paid on 2 September 1991 to shareholders registered at the close of business on 21 June 1991. A first interim dividend of 3.7p per share (1990 - 3.3p) was paid in March 1991, together with the associated tax credit, is equivalent to 4.93p per share (1990 - 4.4p).

This increase in the second interim dividend is in accordance with the statement made on 29 January 1991 announcing the change of our year end. The Annual General Meeting for 1991 will be held at the Connaught Rooms on Friday 20 September 1991, to consider relevant business other than the adoption of the Report and Accounts for the eighteen months to 14 September 1991. An Extraordinary General Meeting to consider and adopt the Accounts will be held during January 1992.

Associated British Foods plc
Weston Centre, 68 Knightsbridge, London SW1X 7LR

Black & Decker Corporation
has sold its wholly-owned Brazilian subsidiary

MALLORY
a former subsidiary of

Emhart Corporation
in a Management Buyout to an Investors Group
led and structured by

Apostel & Co.
a private merchant banking firm.

Apostel & Co.
Av. Brig. Faria Lima, 613 - 7th floor
01451 - São Paulo, SP, Brazil
Tel. 55-11-815-3211
Fax. 55-11-815-2252

UK COMPANY NEWS

Takeover interest in a resilient offshoot

John Murray Brown ponders the future of Vestel, a thriving Polly Peck company

THE MOURNING period is over, says Mr. Vestel, head of Vestel, the Turkish consumer electronics subsidiary of Polly Peck International.

As PPI's creditors meet on Friday in London to decide the fate of the UK fruit to electronics group, Mr. Karan may well ponder on what might have been. Today, seven months after financial difficulties forced PPI's chairman, Mr. Asil Nadir, to seek UK court appointed administrators, Vestel is almost thriving.

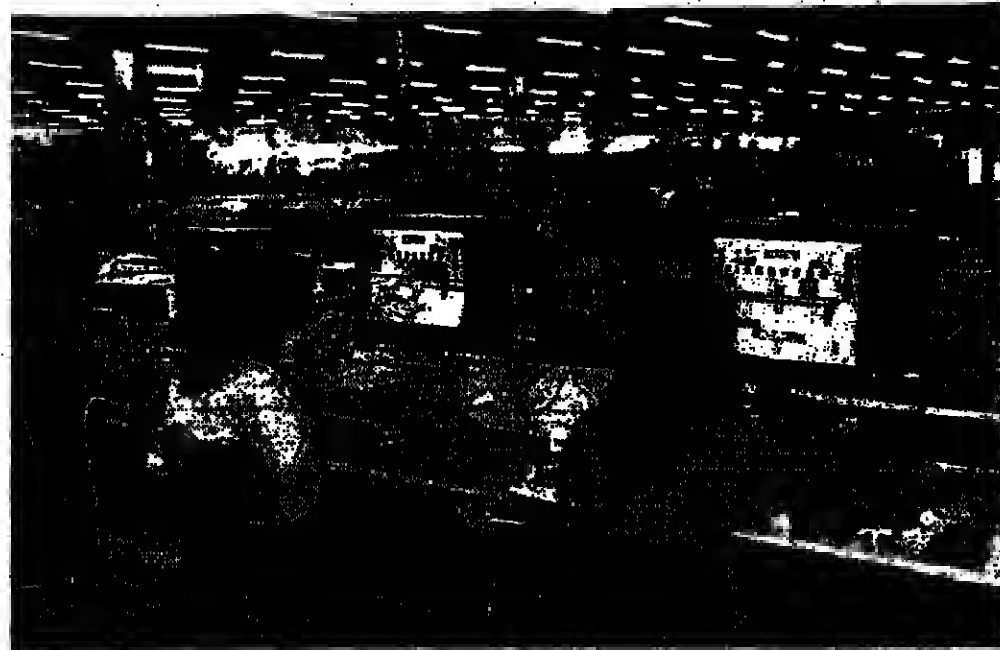
To underpin the point in February, Vestel reported a fourfold boost in pre-tax profits for 1990 to TL167bn (£36m). According to figures in the administrators' report the Vestel group made a trading profit of TL241bn (£52m) in 1990.

The company, reconfirming its reputation as one of PPI's more resilient subsidiaries, negotiated suppliers' credits with Goldstar, its South Korean joint venture partner. It has even won financial backing from some of the very same banks which refused new credits to PPI.

"What was important for the creditors was that the administrators explained they were behind the management," says Mr. Karan.

Loath as they were to admit it, Vestel's success provides an object lesson for its rivals how a foreign investor new to the field can shake up a well established industry and secure almost 20 per cent of the local market together with the largest share of exports.

When Vestel started production in 1985 there were just two makers of consumer electronics in Turkey - Profilo, which the Sony license, and Koc's Arçelik, which makes Hitachi and Toshiba.



Vestel's factory at Manisa where some 30 different brand names are produced

With its eyes on the export market, Vestel rejected the usual "licensed manufacture" route to industrialisation. Instead, after a two-year link with Thorn EMI, Vestel established its own brand name by buying components from the Far East and assembling in Turkey.

"In our industry nothing is sacred," says Mr. Karan. "We have no research and development. We buy integrated circuits. This is 60 per cent of the technology. The rest is just engineering skills."

"When you look at the Far East it takes them a month to ship. We can deliver to the retailers in four or five days," says Mr. Karan.

The political climate was right, with Mr. Turgut Ozal the

then prime minister, introducing sweeping changes in the trade regime in an effort to force new efficiencies in Turkish industry.

Vestel was also ruthless in head hunting local expertise - which in part explains the legacy of mutual bitterness in the industry. Mr. Karan was formerly a general manager at Profilo.

On the financial side, Vestel was able to rely on letters of credit issued by PPI for much of its raw material supplies, an important advantage when you consider that domestic borrowing was costing 100 per cent.

Furthermore, Vestel's 4,500 strong workforce is not unionised, another key factor in its growing labour unrest in Turkey.

Some doubts remain. On the Istanbul stock exchange, where Vestel listed 18 per cent of its stock last June, the shares currently languish at around TL7,800 compared with the issue price of TL13,250.

One reason for this is that many brokers anticipate that the administrators will try to sell many more Vestel shares as part of the restructuring of the group.

Analysts also believe that Vestel may suffer substantial foreign exchange losses this year. Much of the company's input costs are in foreign currencies while its sales earn Turkish lira. The situation could be exacerbated this year with the TL devaluing by more than 30 per cent against the dollar in the first four months of 1991.

Mr. Nadir, used his local newspapers to market Vestel's products as one way to absorb some of the promotion costs.

Whatever questions hang over Vestel, there is no short age of takeover interest despite Mr. Karan's assertions that Vestel will remain part of the PPI core group.

For local groups like Cukurova and Sabanci, Vestel would provide a ready-made entry into electronic manufacturing. For competitors like Koc and Profilo, Vestel represents a chance to increase market share and buy brands.

Koc, Turkey's leading trading house, is understood to have expressed an interest in Vestel's picture tube investment venture with Thompson CSF, the French electronic concern.

Thompson has been mentioned as a possible buyer of Vestel. As one UK fund manager put it: "I think all the big conglomerates will be interested. It's such a cash cow."

NEWS DIGEST

Thorn in talks with Japanese

THORN EMI is discussing the possible sale of its light sensing and light amplification devices business to Hamamatsu Photonics of Japan.

Thorn, which activities include recorded music, rentals and lighting, said it was also talking to Hamamatsu about other forms of collaboration.

The business concerned, Thorn EMI Electronics Tubes, employs 200 people and turned in sales of about £7m in 1989-90.

It is based in Ruislip, Middlesex, with a small marketing unit in New Jersey. Its products are used for scientific and medical purposes.

Godfrey Davis sells Ford dealerships

Godfrey Davis (Holdings), the textiles, car dealing and building services group, has conditionally agreed to sell three of its four Ford dealerships to Godfrey Davis (Trust), a new company owned by directors of the dealerships.

The sale price of £6.69m includes an immediate dividend payment of £1.14m to Godfrey Davis, with the balance payable on completion. Total proceeds of the sale

will result in an extraordinary loss on disposal of about £1.3m, which will be included in Godfrey Davis's interim figures for the six months to end June.

Following the disposal, Godfrey Davis's interests in the motor distribution sector will comprise a single Ford dealership at St Albans, together with property assets still rented out to Ford.

The proceeds will be used to fund further expansion of the group, which is proposing to change its name to Davis Service Group at its forthcoming AGM.

Exchange rate losses put Tharsis into red

The Tharsis Company, a Glasgow-based group which is mainly involved in land development in Spain, incurred a deficit of £153,076 in 1990. The total dividend is more than halved.

The outcome - achieved on turnover of just £370,420 (£2.23m) - compared with taxable profits of £1.62m in the previous year and was struck after exchange rate losses amounting to £275,857 (profit of £27,112).

The position was also affected by the group's share of losses at its Fionn Sur gold mining associate which amounted to £368,065 reflecting a low metal price and the weak dollar.

Following a restructuring, its share of the company increased from about 27 per

cent to 48.6 per cent. The investment was expected to contribute to profits within a few years according to Mr. Freddie Vagge, chairman.

The company's original core activity - the sale outside Spain of pyrites - was expected to cease in the current year.

Earnings per share slumped from 44.9p to 3.23p and a proposed final dividend of 3p brings the total to 6p (12.5p).

Losses deepen at Youghal

Losses deepened in 1990 at Youghal Carpets (Holdings) from £1.26m to £2.34m (£2.55m). There was an operating loss this time of £255,000 compared with profits of £302,000.

Interest charges at this County Cork-based company

rose to £2.18m (£1.88m). In addition, exceptional items increased from £184,000 to £240,000, relating to reorganisation costs of its UK plants.

Turnover fell 17 per cent to £53.23m (£56.44m). Losses per share came out at 6.09p (2.85p).

Rosehaugh holding rebuilt

Funds managed by Robert Fleming have rebuilt their stake in Rosehaugh, the property company headed by Mr. Godfrey Bradman, to 13.18 per cent.

Before Rosehaugh's rights issue in February 1990, Fleming-managed funds held about 12 per cent. The holding was reduced to 4 per cent in September, since when it has gradually increased.

One of the funds is Uni-

Powell Duffryn £5m Dresser purchase

Hamworthy Engineering, the Dorset-based subsidiary of Powell Duffryn, has bought the combustion operation of Dresser Holmes from Dresser Industries of Dallas for £5m.

Dresser Holmes' plants in Kent and the West Midlands will strengthen Hamworthy's existing combustion systems business and improve penetration of the expanding large-scale incinerator and process industry markets.

The two businesses will have a combined turnover of £24m.

FIDELITY BALANCED PORTFOLIO

Société d'Investissement à Capital Variable
33, Boulevard Prince Henri
L-1724 Luxembourg

NOTICE OF ANNUAL GENERAL MEETING

NOTICE is hereby given that the Annual General Meeting of the Shareholders of FIDELITY BALANCED PORTFOLIO, a société d'investissement à capital variable organised under the laws of the Grand Duchy of Luxembourg (the "Fund"), will be held at the registered office of the Fund, 33, Boulevard Prince Henri, Luxembourg, at 11 a.m. on May 30, 1991, specifically, but without limitation, for the following purposes:

1. Presentation of the Report of the Board of Directors.
2. Presentation of the Board of the Auditor.
3. Approval of the balance sheet and income statement for the fiscal year ended January 31, 1991.
4. Discharge of the Board of Directors and the Auditor.
5. Election of five (5) Directors, specifically the reelection of the following five (5) present Directors: Messrs. Edward C. Johnson 3d, Charles T. M. Collis, Charles A. Fraser, Jean Hamillius and H. F. van den Hoven.
6. Election of the Auditor, specifically the election of Coopers & Lybrand, Luxembourg.
7. Declaration of dividends on the Fund's Class A and Class B shares in respect of the fiscal year ended January 31, 1991, and authorisation of the Board of Directors to declare additional dividends in respect of fiscal year 1991 if necessary to enable the Fund to qualify for "distributor" status under United Kingdom tax law.
8. Consideration of such other business as may properly come before the meeting.

Approval of the above items of the agenda will require the affirmative vote of a majority of the shares present or represented at the meeting with no minimum number of shares present or represented in order for a quorum to be present. With respect to Item 6, each class will vote separately its approval of the dividend to be paid on shares of that class; the affirmative vote of a majority of the shares of that class present or represented at the meeting will be required in addition to the affirmative vote of a majority of the vote of the combined classes present or represented at the meeting to approve the dividend. Subject to the limitations imposed by the Articles of Incorporation of the Fund with regard to ownership of either or both Class A and class B shares which constitute in the aggregate more than three percent (3%) of the outstanding shares of both classes, each share is entitled to one vote. A Shareholder may act at any meeting by proxy.

Dated: April 24, 1991

BY ORDER OF THE BOARD OF DIRECTORS

Fidelity Investments

Tenneco Inc.
HOUSTON, TEXAS

1991
is our 45th
consecutive
year of cash
dividend
payments

The 1991 second quarter dividend of 80¢ per share on the Common Stock will be paid June 11 to stockholders of record on May 28. About 129,000 stockholders will share in our earnings.

Karl A. Stewart, Secretary

High interest rates with Jyske Bank

(Interest rates as at 02 April 91)

| Currency | 3 months | 6 months | 12 months |
|--------------|----------|----------|-----------|
| USD 4,300 | 10 1/2 | 11 1/2 | 12 1/2 |
| USD 16,000 | 10 1/2 | 11 1/2 | 12 1/2 |
| GBP, England | 10 | 11 | 11 1/2 |
| ESR, Spain | 11 1/2 | 11 1/2 | 11 1/2 |
| SEK, Sweden | 9 3/4 | 10 3/4 | 10 3/4 |
| ECU | 8 1/2 | 8 1/2 | 8 1/2 |

On USD 80,000 you will earn 0.50% extra interest
14 currencies to choose from
No Danish taxes for non-residents in Denmark
Professional cost-effective service

Please send me information on currency deposits and other benefits of Jyske Bank

Name _____

Address _____

Telephone _____

Jyske Bank
P.O. Box 100
DK-1000 Copenhagen V
Denmark
Telex: 3333 JYSKE
Jyske Bank Ltd, London, UK
Jyske Bank AG, Zurich, Switzerland

To The Holders of
Banco Central De Costa Rica
US \$446,111,111 Series A Interest
Claims Bonds Due May 21, 2005
US \$78,435,520 Series B Interest
Claims Bonds Due May 21, 2005

NOTICE IS HEREBY GIVEN, that the rate of interest from May 21, 1991, through and including August 21, 1991, is 6.575% per annum. Interest coupon payable on August 21, 1991, will amount to \$7,395.15 per \$100,000 nominal face amount.

By: BankAmerica Trust Company of New York
as Fiscal Agent
Dated: May 21, 1991

CHAIRMAN'S STATEMENT

Despite the intense competition in 1990, and through a firm internal policy of 'good housekeeping', Mr Jon Foulds, Chairman of Halifax Building Society, was able to announce exceptional results for the year in his first annual statement.

- Pre-tax profits up by 11% to £593 million.
- Cost/income ratio improved from 51.4% to 48.5%.
- Assets grow to £54,000 million.
- Gross lending of £9,600 million to 211,000 borrowers.
- Market share of lending sustained at 17%.
- Savings and investment balances up by £5,600 million.

"It is," said Mr Foulds "my firm belief that the quality of Halifax assets, our capital strength, profitability and efficient management place us among the leading European financial institutions."

Everything about the Halifax is substantial, both its achievements and its ambitions.

Yet it is the constant principle of the organisation that all the success to date will only continue if customer needs are met with excellent products and an exceptionally good service.

Good housekeeping, consolidating and preserving asset quality, enhancing service and controlling costs have not deflected the Society from its steady programme of introducing new products and services.

During 1990, the broad range of mortgage schemes was widened to encompass special offers for first time buyers, larger borrowers and those looking for a fixed rate mortgage, whilst prudent lending policies ensured that

borrowers were not allowed to over-commit themselves. New saving schemes

were added to the traditional portfolio of Instant Xtra and 90 Day Xtra. These included a one year bond - Capital Xtra and a high return investment - Time Deposits.

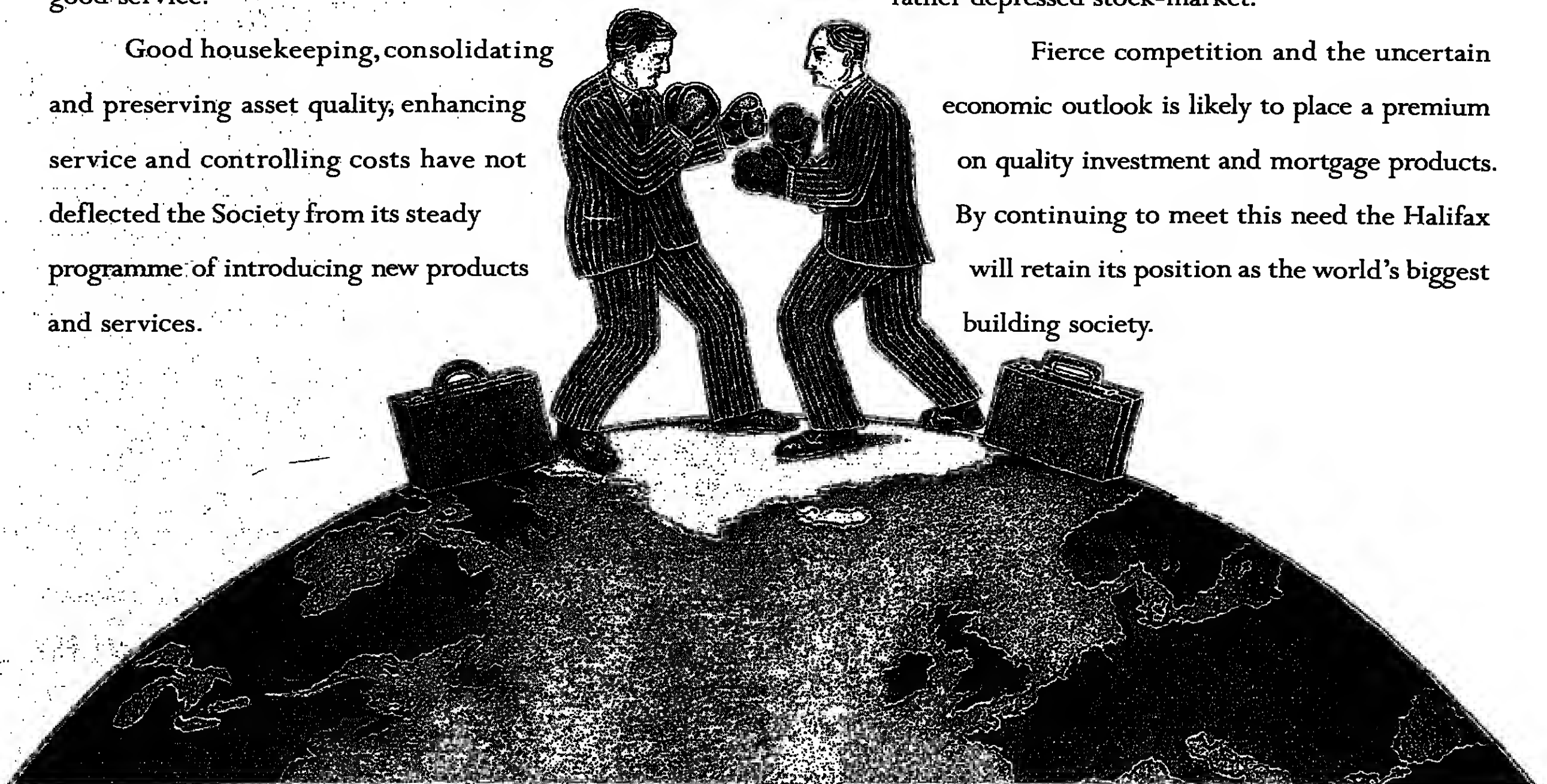
Following the 1990 Budget encouragement for savers, the Halifax introduced a TESSA scheme which has proved spectacularly successful with currently over 350,000 customers and almost £1,000 million invested.

The appeal of Maxim, the Society's current account, continued to grow, and now 350,000 customers have the additional benefit of the Switch facility.

Halifax Standard Life, a joint venture unit trust company, was formed to offer a range of personal equity plans and unit trusts, the first of which, Global Advantage, made an encouraging start despite the background of a rather depressed stock-market.

Fierce competition and the uncertain economic outlook is likely to place a premium on quality investment and mortgage products. By continuing to meet this need the Halifax will retain its position as the world's biggest building society.

"IN A FIERCELY COMPETITIVE WORLD, ONLY THE BEST WILL SURVIVE AND PROSPER."



HALIFAX

HALIFAX BUILDING SOCIETY, TRINITY ROAD, HALIFAX, WEST YORKSHIRE HX1 2RG.

COMMODITIES AND AGRICULTURE

Food export loans might cost US Treasury \$6.7bn

By Nancy Dunne

THE US Treasury may have to pay as much as \$6.7bn (\$3.9bn) for delinquencies on loans backed by the US Agriculture Department to boost food exports, a government report said.

The General Accounting Office, the investigative arm of Congress, said the cost of the government's export credit guarantee programme might soar because the USDA has been forced by law to hand out billions of dollars in guarantees to high-risk countries like Iraq. The countries which received these guarantees are even less likely to meet their obligations than poorer countries which get soft loans for food aid.

The GAO report has become a factor in the debate over the Soviet request for \$1.5bn in new guarantees. President Bush has said he wants to extend the guarantees but he is being restrained by creditworthiness requirements written into last year's farm bill.

The investigation noted that Moscow's credit rating by international banks has deteriorated rapidly in the past year, showing the second greatest one-year decline for a country in the past decade.

The report estimated that of the \$12.2bn in guarantees and

BRAZILIAN and Argentinean officials are to meet this week to discuss a compromise on Brazil's plan to import 700,000 tonnes of subsidised wheat from the United States, writes John Barham in Buenos Aires.

Meetings were announced after the economy ministers of both countries met in Rio de Janeiro at the weekend. The announcement that Brazil planned to import subsidised wheat fell like a bombshell in Buenos Aires, which considers Brazil a captive market. Argentinean

officials were outraged that their principal trading partner and a founding member of the nascent Southern Cone Common Market would accept subsidised wheat. Earlier, Argentine officials said they accepted a US promise to start exporting only after Argentina had filled its 2m tonne quota. Officials have confirmed that the government is trying to use the threat of US wheat sales to press middlemen and grain exporters to moderate their prices and so avoid a surge in inflation.

The GAO was told that loan guarantees have often been the result of political considerations. Last year, however, Congress prohibited the use of the programme for foreign policy purposes.

The CCC has been experiencing difficulty in collecting its debts, according to the GAO. Its practice has been to suspend further guarantees until payments are made or rescheduled and to use diplomatic channels to encourage repayment.

Of the \$2.7bn in rescheduled debt last May, \$1.4bn has been due, with \$900m of that delinquent.

delinquent or rescheduled payments outstanding last May, the treasury might have to pay out 60 per cent or \$3.7bn.

The GAO's officials admitted to the GAO that they have had difficulty finding creditworthy countries for the programme. Congress has required the Commodity Credit Corporation, the USDA's bank, to make available "not less than \$50m" in short-term guarantees for each of the fiscal years 1991 to 1995 and not less than \$500m a year in intermediate loans in the same period. Another \$1bn is supposed to be made available for exports to emerging democracies.

Low cocoa prices sap Malaysian resolve to beat the podborer

By Lim Siong Hoon

FOR NEARLY a decade cocoa planters in Malaysia waged periodic, and successful, battles to beat back the pest known as the "podborer". It is able to penetrate the hard fruit pods, feed on the pulp, and stunt the growth of beans.

Conopomorpha cramerella is making a comeback today because low cocoa prices in the world market have started to weaken the planters' resolve to deal with it.

As a result podborers have infested more than 5,000 hectares in peninsular Malaysia, compared with 4,000 hectares before May 1990.

The area may seem small, just 3 per cent of the 148,000 hectares of cocoa farms in a peninsula which accounts for 35 per cent of the 247,000 tonnes in 1990 national production. The remainder comes mainly from the Borneo state of Sabah.

But the infestations, coupled with low returns, have touched off drastic measures. Plantations are beginning to destroy their cocoa trees while the government turns a blind eye to a quarantine law intended to

deal with the pest. Plantations have destroyed up to 1,000 hectares of cocoa trees in recent months. With yields of between 700 kg to 1,200 kg per hectare, they are some of the country's best growers.

The destruction also has to do with the quarantine law which requires planters to eradicate the pest through a number of prescribed measures, such as burying the infested pods and employing intensive pesticide spraying.

But such measures double the production cost at a time when planters are least willing to spend. Mr Ooi Ling Hoek, an agronomist, said: "If they can't conform to the law, they want to chop down the trees."

Among state-subsidised smallholdings, typically a hectare or less, the law has been a strong resistance to complying with the law, partly because their yields are even lower. The government's offer to compensate them, at about \$31,000 for each hectare of cocoa crop destroyed, were also rejected.

The defiance opens the smallholdings to prosecution,

but according to planters this would be unlikely for political reasons. And without their co-operation the infestation is certain to spread.

Rising infestation is intensifying the debate between planters and the government about whether to change or nullify the law to switch the emphasis from eradicating the podborer simply to containing it.

Mr Ooi said: "For practical reasons eradication looks impossible. Maybe we should learn to live with the pest."

In Sabah, where the law is absent, the podborers spread through the state within two years of dealing with them has become "just another production cost item" said Mr Ooi.

The Malaysian Cocoa Growers' Council argues for a threshold level - 10 per cent to 15 per cent - at which the infestation of every 1,000 pods - beyond which control measures be required.

At that level the loss on bean extraction would be compensated for by savings from the existing high production costs incurred by law. That an agricultural official said, estates could tolerate.

A gold mine that takes the breath away

Kenneth Gooding visits the Choquelimpie project high in the Chilean Andes

Going to the Choquelimpie gold mine in Chile takes your breath away - literally. It is the highest commercial mine in the world, in the month of a dead volcano 4,825 metres (15,777 ft) up in the high Andes.

At this height air has only about half as much oxygen as at sea level. Pressure in the lungs is reduced by half. Hearts have to beat faster and breathing is more rapid as the body tries to absorb enough oxygen.

This poses special problems for an enterprise which is shifting 4.5m tonnes of rock a year to leach out the gold and silver.

This is a mine where a medical is compulsory for visitors, when blood pressure and pulse rates are checked. One person in three suffers altitude sickness which causes headaches, nausea and, sometimes, vomiting. But severe cases can be countered by bottled oxygen, which is kept on hand.

High altitude mining, which Choquelimpie is pioneering in Chile, has other complications. There are ferocious "tormentas eléctricas" - electrical storms which streak in from Bolivia, 20 km to the east, between January and March, fall into the volcano's mouth, spit lightning in all directions and bring a mixture of rain and snow which halts all operations.

At such times the air is filled with static electricity which makes the hair stand straight up on end. Lightning conductor masts and deflecting cables fished to prevent a mine being struck down by lightning and killed in March this year as he stood defiantly with hands in pockets on the edge of the waste dumps.

Many of the 700 employees are recruited from fishing towns at sea level. Never before have they touched snow, let alone driven earth-moving equipment in it. Four people suffered eye problems from the effects of the glare of sunshine on snow before the management decided that miners had to be taught to wear sunglasses to keep out the intense ultraviolet light. Sunglasses are now supplied to employees as part of their standard equipment.

Sociedad Contractual Minera y Metalúrgica, a partnership between Billiton, the Royal Dutch/Shell offshoot (41.7 per cent), Northgate of Canada (35.3 per cent) and Citibank (23 per cent), which operates Choquelimpie, is helping to finance a study of the effects of high altitude on miners. It is also piecing together information about protection from electrical storms which is frequently proving to be contradictory.

All this will be of immense value as mining activity bulks up in Chile, one of the world's most mineral-rich countries, and one which is attracting a great deal of foreign investment since its recent return to democratic government.

Much of Chile's treasure is locked in the high Andes. Breathtaking current projects include Colchagua's Andina copper operation at 4,200 metres (13,779 ft); La Colpa gold project (Placer Dome and TVX Gold) at 4,100 metres (13,451 ft); and Cominco's Quebrada Blanca copper project at 4,280 metres (14,042 ft).

Two of the Choquelimpie partners, Billiton and Citibank, have a potentially important copper project, Collahuasi, not far from Choquelimpie, at 4,400 metres (14,388 ft). Mr Rodney Lay, managing director of Billiton Chile, said there was no way of knowing if individual geologists needed for the current \$10m exploration programme at Collahuasi would be able to work at that altitude except by taking each one there to see what happened.

There seems to be no pattern. Extremely fit and active people have been known to suffer badly while some overweight, heavy-smoking types feel no effects," he said.

At Choquelimpie it takes about two weeks for the first effects of high altitude working to wear off as the body builds up more red corpuscles in the blood. After about two months



High stake: at an altitude of 4,825 metres 4.5m tonnes of rock a year is being shifted from a dead volcano

something like full adjustment takes place although muscular strength is reduced. Recent tests have shown that problem-solving ability and creativity is permanently weakened.

Because humidity is substantially reduced at great heights, employees suffer from dehydration unless they drink a great deal more than usual. But the bad news is that alcohol taken at extreme height has little of the usual relaxing impact.

In any case, employees are advised against heavy drinking or taking tranquillizers to help overcome the sleeplessness which is another perennial problem at great altitudes.

Shallow breathing when sleeping often does not allow the lungs to collect enough oxygen and the sleeper wakes to breathe more deeply. Artificial aids to sleep might cause gradual suffocation.

The Vilacollo partners decided it would be more comfortable for employees if Choquelimpie's mining camp was a little lower, at Putre, a small town at 3,500 metres (11,446 ft) with employees based in for the three shifts, round-the-clock working.

They travel through spectacular mountains of brown, sepia

and red, covered with detritus spewed from long-dead volcanoes. The mine is in a vicuña reserve and these animals, along with llamas and guanaco, roam freely just outside the fence put up to keep them from harm. The scene is dominated by two brooding, snow-capped volcanoes, Parícuta and Pomerape.

According to Mr Orlando Olivares, the general manager, Vilacollo offers the best pay in the region. Even so, annual employee turnover is a staggering 70 per cent. Even after the two-month adjustment period some suffer depression and feel they cannot stay on.

In spite of this employee turnover Choquelimpie shifted 4.5m tonnes of material (2.15m tonnes of ore and the rest waste) last year, twice the rated capacity of its plant. It produced 100,300 troy ounces of gold - to rank as Chile's third largest gold mine.

Mr Jan Alkerman, Choquelimpie's chief geologist, is not deterred by what the research might produce, and is arranging a joint scientific-exploration venture up the slopes of the nearby volcanoes which soar to 5,300 metres (17,388 ft), where there is even less oxygen but where he reckons more mineral riches are waiting to be found.

All personnel at the mine will be checked 1,100 metres lower at Putre, and in Africa, a sea level town, in an attempt to identify any with heart problems or others potentially at risk.

Mr Palma said: "We want to know more about how hearts and lungs function at high altitudes to prevent problems developing, possibly with the help of drugs." He said changes to the mine's working patterns might be called for.

The initial four-week study will be followed by annual follow-up tests to see whether there are any long-term effects.

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WORLD COMMODITIES PRICES

MARKET REPORT

Nickel prices closed at the day's lows on the LME yesterday after general liquidation, although sporadic consumer interest prevented substantial losses. Dealers said three-month nickel is testing support around \$8,300 a tonne and a breach of that would put prices on course towards \$7,775, some said. But the market is likely to be cautious about extending declines as labour talks at Canadian producer Inco are crucial stage, dealers added. The current labour contract there expires at the end of May. Copper prices closed ahead, but off the day's highs. Dealers said copper mostly consolidated in routine trading, holding comfortably above

\$2,200 a tonne end shrugging off news that the Polish copper miners strike had ended. LME warehouse stock figures are expected to rise some 4,000 tonnes today. Aluminium prices fluctuated under the influence of the dollar; its early strength, coupled with the holiday in many European centres, dampened hopes of consumer buying interest developing. London cocoa edged ahead, although some traders expected bigger gains because of unrest in Cameroon. In New York cotton futures hit new lifetime peaks before midday on continued wet weather and fears of delayed plantings. Compiled from Reuters

London Markets

| SPOT MARKETS | |
|-----------------------------------|---------------------|
| Crude oil (per barrel FOB) | + or - |
| Dubai | \$16.10-16.20 +0.05 |
| Brent Blend (dated) | \$16.20-16.30 +0.10 |
| Strait Blend (dated) | \$16.30-16.40 +0.10 |
| WTI (1 m cmt) | \$16.15-16.25 +0.05 |
| Oil products | |
| NHE prompt delivery per tonne CIF | + or - |
| Premium Gasoline | \$250-252 |
| Gas Oil | \$185-187 |
| Heavy Fuel Oil | \$185-187 |
| Naphtha | \$215-217 +2 |
| Other | |
| Gold (per troy oz) | \$355.35 +0.05 |
| Silver (per troy oz) | \$422.50 -2.50 |
| Platinum (per troy oz) | \$338.25 |
| Palladium (per troy oz) | \$34.10 -0.05 |
| Aluminium (3 m cmt) | \$1,286 -10 |
| Copper (US Producer) | 104c |
| Lead (US Producer) | 34c |
| Nickel (3 m cmt) | 39c +2 |
| Tin (Kuala Lumpur market) | 15.45c |
| Tin (New York) | 297c -1 |
| Zinc (US Prime Western) | 62c |
| Cattle (live weight) | |
| Sheep (live weight) | 112.5p +0.10 |
| Pigs (live weight) | 85.5p -0.74 |
| London daily sugar (raw) | |
| London daily sugar (white) | \$24.50 -3.00 |
| Ten and Lyle export price | \$22.50 +2.5 |
| Barley (English feed) | |
| Maize (US No 3 yellow) | \$178.5 |
| Wheat (US Dark Northern) | \$110 |
| Rubber (Jun 10) | |
| Rubber (Jun 10) | \$5.50p -0.25 |
| Rubber (Jul 10) | \$5.00p -0.25 |
| Rubber (Nov 10) | \$2.50p +1.0 |
| Cocoa oil (Philippines) | |
| Palm Oil (Malaysian) | Unq |
| Copra (Philippines) | Unq |
| Soyabean (US) | Unq |
| Cotton "A" index | \$4.75c |
| Woollops (84 Super) | 384p -3 |

c-cents/b, r-rings/q, q-Jun/Jul 1-Jun 1-Jul 1-Aug, 2-Jul/Aug, 3-Jul/Aug, 4-Jul/Aug, 5-Jul/Aug, 6-Jul/Aug, 7-Jul/Aug, 8-Jul/Aug, 9-Jul/Aug, 10-Jul/Aug, 11-Jul/Aug, 12-Jul/Aug, 13-Jul/Aug, 14-Jul/Aug, 15-Jul/Aug, 16-Jul/Aug, 17-Jul/Aug, 18-Jul/Aug, 19-Jul/Aug, 20-Jul/Aug, 21-Jul/Aug, 22-Jul/Aug, 23-Jul/Aug, 24-Jul/Aug, 25-Jul/Aug, 26-Jul/Aug, 27-Jul/Aug, 28-Jul/Aug, 29-Jul/Aug, 30-Jul/Aug, 31-Jul/Aug, 1-Aug, 2-Aug, 3-Aug, 4-Aug, 5-Aug, 6-Aug, 7-Aug, 8-Aug, 9-Aug, 10-Aug, 11-Aug, 12-Aug, 13-Aug, 14-Aug, 15-Aug, 16-Aug, 17-Aug, 18-Aug, 19-Aug, 20-Aug, 21-Aug, 22-Aug, 23-Aug, 24-Aug, 25-Aug, 26-Aug, 27-Aug, 28-Aug, 29-Aug, 30-Aug, 31-Aug, 1-Sep, 2-Sep, 3-Sep, 4-Sep, 5-Sep, 6-Sep, 7-Sep, 8-Sep, 9-Sep, 10-Sep, 11-Sep, 12-Sep, 13-Sep, 14-Sep, 15-Sep, 16-Sep, 17-Sep, 18-Sep, 19-Sep, 20-Sep, 21-Sep, 22-Sep, 23-Sep, 24-Sep, 25-Sep, 26-Sep, 27-Sep, 28-Sep, 29-Sep, 30-Sep, 1-Oct, 2-Oct, 3-Oct, 4-Oct, 5-Oct, 6-Oct, 7-Oct, 8-Oct, 9-Oct, 10-Oct, 11-Oct, 12-Oct, 13-Oct, 14-Oct, 15-Oct, 16-Oct, 17-Oct, 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CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Dollar down in thin trading

THE DOLLAR lost ground in thin trading, with many European centres closed for the Whitsun holiday. Lack of fresh economic news left the dollar to drift lower in a corrective reaction to Friday's upward move.

The US Federal Reserve and the German Bundesbank were reported to have sold dollars last Friday in New York, as the currency rose sharply to a high of around DM1.78, on the deluge of the Swedish krona from a basket of currencies in which the dollar had a 21 per cent weighting.

Interest rate differentials had favoured the krona against the dollar in this basket, encouraging operators to borrow the US currency and lend krona. This created short dollar positions which had to be covered on Friday as a result of Sweden's decision to link the krona to the Ecu.

The levels touched in New York on Friday suggested that this process was overdone however, leading to yesterday's reversal.

But dealers in Tokyo were not convinced that the situation would be unravelled without a further rise in the dollar's value. In the Far East it finished at DM1.7560 and ¥138.85, amid speculation that squaring of positions involving an Ecu linked currency would

hit the D-Mark because of the high level of liquidity in the German unit.

Japanese traders estimated that this could lead to extra demand of around \$10-20bn for the dollar.

In quiet trading the US currency fell to DM1.7280 from DM1.7380 at the London close. It also declined to ¥138.20 from ¥138.45; and to SFr1.4580 from SFr1.4670. The dollar's index rose to 65.4 from 65.3.

The D-Mark finished little changed against the Japanese yen, after suffering some weakness in Tokyo cross trading as traders hedged short dollar positions against European currencies. It closed in London at ¥79.56 compared with ¥79.75 on Friday, improving from the level of around ¥79.00 at the Tokyo close.

There was some speculation that the Bank of Japan may soon cut its discount rate but

yesterday's action by the central bank, draining liquidity from the Tokyo money market, gave no encouragement to this view.

The closure of many European centres left foreign exchange trading thin and volatile. There were no official figures on the European exchange rate mechanism from the European Commission, but unofficial data pointed to a strengthening of currencies where the main trading centre was closed. Milan and London were open, and the lira and sterling fell from second and third strongest in the ERM, to be replaced by the Belgian franc and Danish krona.

In London sterling rose ¼ cent to \$1.7190, but fell to DM2.9700 from DM2.9800; to SFr2.5575 from SFr2.5575, but rose to ¥229.70 from ¥229.70. The pound's index fell to 0.7620 from 0.7620.

EMS EUROPEAN CURRENCY UNIT RATES

| | Unit | Rate | % Change | % Spread | Change |
|-------------|------|--------|----------|----------|--------|
| Belgium | 100 | 133.43 | -0.3 | 0.16 | 81 |
| France | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Germany | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Italy | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Netherlands | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Spain | 100 | 133.43 | -0.3 | 0.16 | 81 |
| UK | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Denmark | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Greece | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Ireland | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Portugal | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Sweden | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Switzerland | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Austria | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Finland | 100 | 133.43 | -0.3 | 0.16 | 81 |
| Yugoslavia | 100 | 133.43 | -0.3 | 0.16 | 81 |

Unit rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

POUND SPOT - FORWARD AGAINST THE POUND

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

Forward rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

DOLLAR SPOT - FORWARD AGAINST THE DOLLAR

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

Forward rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

EURO CURRENCY INTEREST RATES

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

Forward rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

EXCHANGE CROSS RATES

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

Forward rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

OTHER CURRENCIES

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

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Adjusted according to Financial Times.

MONEY MARKETS

London rates ease

WEAK UK retail sales encouraged an easing of whole sale interest rates in London yesterday. April sales fell 3.5 per cent, after rising 3.6 per cent in March. A decline was expected, but the figure was weaker than forecasts of around 2.8 per cent.

Three-month sterling interbank fell to 11½-11¾ from 11¼-11½, while 12-month money was unchanged 11¼-11½ per cent.

Short sterling futures rose to the day's high on Life after the retail sales news,

per cent.

At lunch another £200m bank bills were purchased in band 1 at 11½ per cent. In the afternoon £200m bills were bought, by way of £18m Treasury bills in band 1 at 11½ per cent and £182m bank bills in band 1 at 11½ per cent. Late afternoon around £70m was also provided.

Bills maturing in official hands, repayment of late assistance and a take-up of Treasury bills drained £1,016m, with exchange transactions absorbing £400m and bank balances below target £25m.

These outweighed a fall in the note circulation adding £610m to liquidity.

In Stockholm interest rates fell sharply on the first day of trading since Sweden linked the krona to the European currency unit, taking it out of a basket dominated by the dollar.

Six-month Treasury bills declined to 11.35 from 11.97 per cent and 10-year government bonds fell to 10.45 from 10.95 per cent. Financial markets in Stockholm were officially closed for the Whitsun holiday, but the Swedish Central Bank opened its dealing room to smooth moves towards a more European linked currency.

According to dealers linking the krona to the Ecu had effectively ruled out a devaluation, encouraging yesterday's downward move in rates.

An early round of help was offered and at that time the authorities bought £150m bank bills outright in band 1 at 11½

FINANCIAL FUTURES AND OPTIONS

LIVE LINE: GILT FUTURES OPTIONS

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

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Adjusted according to Financial Times.

LIVE LINE: US TREASURY FUTURES OPTIONS

| | May 20 | Day's | One | Three | % |
|-----|---------|---------|---------|---------|------|
| US | 1.7190 | 1.7190 | 1.7190 | 1.7190 | 0.16 |
| DM | 2.9700 | 2.9700 | 2.9700 | 2.9700 | 0.16 |
| ¥ | 229.70 | 229.70 | 229.70 | 229.70 | 0.16 |
| SFr | 2.5575 | 2.5575 | 2.5575 | 2.5575 | 0.16 |
| ITL | 2036.26 | 2036.26 | 2036.26 | 2036.26 | 0.16 |
| ESP | 166.64 | 166.64 | 166.64 | 166.64 | 0.16 |
| DKK | 136.76 | 136.76 | 136.76 | 136.76 | 0.16 |
| SEK | 10.46 | 10.46 | 10.46 | 10.46 | 0.16 |
| NOK | 13.76 | 13.76 | 13.76 | 13.76 | 0.16 |
| FIN | 5.94 | 5.94 | 5.94 | 5.94 | 0.16 |
| GRD | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| IRL | 7.88 | 7.88 | 7.88 | 7.88 | 0.16 |
| POR | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |
| YUG | 200.48 | 200.48 | 200.48 | 200.48 | 0.16 |

Forward rates are for the European Commission. Currencies are in decimal relative strength. Percentage change is for Ecu, a positive change denotes a weak currency. Difference shows the ratio between two specific currencies. Difference between the actual rate and the Ecu rate for a currency. See the section on the EMS website for more details.

Adjusted according to Financial Times.

LIVE LINE: EURO CURRENCY FUTURES OPTIONS

| | Close | High | Low |
|-----|-------|-------|-------|
| Jun | 90-20 | 90-24 | 90-11 |
| Sep | 90-26 | 90-28 | 90-17 |

Estimated volume 11221 (25407)
Previous day's open int. 33496 (13635)

| | Close | High | Low |
|-----|-------|-------|-------|
| Jun | 95-16 | 95-17 | 95-10 |
| Sep | 94-21 | 94-18 | 94-18 |

Estimated volume 564 (2340)
Previous day's open int. 2123 (1057)

SSWORD

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| TOKYO - Most Active Stocks | | | | | | | | | |
|----------------------------|------|------------------|-------------------|------------------|------------------|-------------------|------------------|-----|--|
| Monday 20 May 1991 | | | | | | | | | |
| | | Stocks Traded | Closing Prices | Change on day | | | | | |
| JEPER | OTK1 | | | | Stocks Traded | Closing Prices | Change on day | | |
| Worle | | 7.3 | 785 | -18 | Yokohama Rub- | 2.1 | 518 | -10 | |
| Huachu | | 4.5 | 1,128 | 19 | Daewoo | 2.0 | 1,080 | -16 | |
| Mitsubishi Heavy | | 2.6 | 748 | -7 | Mitsubishi Elec- | | | | |
| Chiyoda | | 2.9 | 2,400 | -60 | Sumitomo Metal | 1.7 | 722 | -13 | |
| Toshiba | | 2.8 | 601 | -87 | Wanwan Retail | 1 | 600 | 0 | |

| Report Date | 10 | 400 | 10 |
|-------------|----|-----|----|
| 10/1/2010 | 10 | 400 | 10 |
| 10/2/2010 | 10 | 400 | 10 |
| 10/3/2010 | 10 | 400 | 10 |
| 10/4/2010 | 10 | 400 | 10 |
| 10/5/2010 | 10 | 400 | 10 |
| 10/6/2010 | 10 | 400 | 10 |
| 10/7/2010 | 10 | 400 | 10 |
| 10/8/2010 | 10 | 400 | 10 |
| 10/9/2010 | 10 | 400 | 10 |
| 10/10/2010 | 10 | 400 | 10 |
| 10/11/2010 | 10 | 400 | 10 |
| 10/12/2010 | 10 | 400 | 10 |
| 10/13/2010 | 10 | 400 | 10 |
| 10/14/2010 | 10 | 400 | 10 |
| 10/15/2010 | 10 | 400 | 10 |
| 10/16/2010 | 10 | 400 | 10 |
| 10/17/2010 | 10 | 400 | 10 |
| 10/18/2010 | 10 | 400 | 10 |
| 10/19/2010 | 10 | 400 | 10 |
| 10/20/2010 | 10 | 400 | 10 |
| 10/21/2010 | 10 | 400 | 10 |
| 10/22/2010 | 10 | 400 | 10 |
| 10/23/2010 | 10 | 400 | 10 |
| 10/24/2010 | 10 | 400 | 10 |
| 10/25/2010 | 10 | 400 | 10 |
| 10/26/2010 | 10 | 400 | 10 |
| 10/27/2010 | 10 | 400 | 10 |
| 10/28/2010 | 10 | 400 | 10 |
| 10/29/2010 | 10 | 400 | 10 |
| 10/30/2010 | 10 | 400 | 10 |
| 10/31/2010 | 10 | 400 | 10 |
| 11/1/2010 | 10 | 400 | 10 |
| 11/2/2010 | 10 | 400 | 10 |
| 11/3/2010 | 10 | 400 | 10 |
| 11/4/2010 | 10 | 400 | 10 |
| 11/5/2010 | 10 | 400 | 10 |
| 11/6/2010 | 10 | 400 | 10 |
| 11/7/2010 | 10 | 400 | 10 |
| 11/8/2010 | 10 | 400 | 10 |
| 11/9/2010 | 10 | 400 | 10 |
| 11/10/2010 | 10 | 400 | 10 |
| 11/11/2010 | 10 | 400 | 10 |
| 11/12/2010 | 10 | 400 | 10 |
| 11/13/2010 | 10 | 400 | 10 |
| 11/14/2010 | 10 | 400 | 10 |
| 11/15/2010 | 10 | 400 | 10 |
| 11/16/2010 | 10 | 400 | 10 |
| 11/17/2010 | 10 | 400 | 10 |
| 11/18/2010 | 10 | 400 | 10 |
| 11/19/2010 | 10 | 400 | 10 |
| 11/20/2010 | 10 | 400 | 10 |
| 11/21/2010 | 10 | 400 | 10 |
| 11/22/2010 | 10 | 400 | 10 |
| 11/23/2010 | 10 | 400 | 10 |
| 11/24/2010 | 10 | 400 | 10 |
| 11/25/2010 | 10 | 400 | 10 |
| 11/26/2010 | 10 | 400 | 10 |
| 11/27/2010 | 10 | 400 | 10 |
| 11/28/2010 | 10 | 400 | 10 |
| 11/29/2010 | 10 | 400 | 10 |
| 11/30/2010 | 10 | 400 | 10 |
| 12/1/2010 | 10 | 400 | 10 |
| 12/2/2010 | 10 | 400 | 10 |
| 12/3/2010 | 10 | 400 | 10 |
| 12/4/2010 | 10 | 400 | 10 |
| 12/5/2010 | 10 | 400 | 10 |
| 12/6/2010 | 10 | 400 | 10 |
| 12/7/2010 | 10 | 400 | 10 |
| 12/8/2010 | 10 | 400 | 10 |
| 12/9/2010 | 10 | 400 | 10 |
| 12/10/2010 | 10 | 400 | 10 |
| 12/11/2010 | 10 | 400 | 10 |
| 12/12/2010 | 10 | 400 | 10 |
| 12/13/2010 | 10 | 400 | 10 |
| 12/14/2010 | 10 | 400 | 10 |
| 12/15/2010 | 10 | 400 | 10 |
| 12/16/2010 | 10 | 400 | 10 |
| 12/17/2010 | 10 | 400 | 10 |
| 12/18/2010 | 10 | 400 | 10 |
| 12/19/2010 | 10 | 400 | 10 |
| 12/20/2010 | 10 | 400 | 10 |
| 12/21/2010 | 10 | 400 | 10 |
| 12/22/2010 | 10 | 400 | 10 |
| 12/23/2010 | 10 | 400 | 10 |
| 12/24/2010 | 10 | 400 | |

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FT SURVEYS



FINANCIAL TIMES
EUROPE'S BUSINESS NEWSPAPER

3:15 pm prices May 20

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

| NYSE LISTED STOCKS | | | NYSE LISTED STOCKS | | |
|--------------------|--------|--------|--------------------|--------|--------|
| Symbol | Price | Change | Symbol | Price | Change |
| 1000 | 100.00 | 0.00 | 1000 | 100.00 | 0.00 |
| 1001 | 100.01 | 0.01 | 1001 | 100.01 | 0.01 |
| 1002 | 100.02 | 0.02 | 1002 | 100.02 | 0.02 |
| 1003 | 100.03 | 0.03 | 1003 | 100.03 | 0.03 |
| 1004 | 100.04 | 0.04 | 1004 | 100.04 | 0.04 |
| 1005 | 100.05 | 0.05 | 1005 | 100.05 | 0.05 |
| 1006 | 100.06 | 0.06 | 1006 | 100.06 | 0.06 |
| 1007 | 100.07 | 0.07 | 1007 | 100.07 | 0.07 |
| 1008 | 100.08 | 0.08 | 1008 | 100.08 | 0.08 |
| 1009 | 100.09 | 0.09 | 1009 | 100.09 | 0.09 |
| 1010 | 100.10 | 0.10 | 1010 | 100.10 | 0.10 |
| 1011 | 100.11 | 0.11 | 1011 | 100.11 | 0.11 |
| 1012 | 100.12 | 0.12 | 1012 | 100.12 | 0.12 |
| 1013 | 100.13 | 0.13 | 1013 | 100.13 | 0.13 |
| 1014 | 100.14 | 0.14 | 1014 | 100.14 | 0.14 |
| 1015 | 100.15 | 0.15 | 1015 | 100.15 | 0.15 |
| 1016 | 100.16 | 0.16 | 1016 | 100.16 | 0.16 |
| 1017 | 100.17 | 0.17 | 1017 | 100.17 | 0.17 |
| 1018 | 100.18 | 0.18 | 1018 | 100.18 | 0.18 |
| 1019 | 100.19 | 0.19 | 1019 | 100.19 | 0.19 |
| 1020 | 100.20 | 0.20 | 1020 | 100.20 | 0.20 |
| 1021 | 100.21 | 0.21 | 1021 | 100.21 | 0.21 |
| 1022 | 100.22 | 0.22 | 1022 | 100.22 | 0.22 |
| 1023 | 100.23 | 0.23 | 1023 | 100.23 | 0.23 |
| 1024 | 100.24 | 0.24 | 1024 | 100.24 | 0.24 |
| 1025 | 100.25 | 0.25 | 1025 | 100.25 | 0.25 |
| 1026 | 100.26 | 0.26 | 1026 | 100.26 | 0.26 |
| 1027 | 100.27 | 0.27 | 1027 | 100.27 | 0.27 |
| 1028 | 100.28 | 0.28 | 1028 | 100.28 | 0.28 |
| 1029 | 100.29 | 0.29 | 1029 | 100.29 | 0.29 |
| 1030 | 100.30 | 0.30 | 1030 | 100.30 | 0.30 |
| 1031 | 100.31 | 0.31 | 1031 | 100.31 | 0.31 |
| 1032 | 100.32 | 0.32 | 1032 | 100.32 | 0.32 |
| 1033 | 100.33 | 0.33 | 1033 | 100.33 | 0.33 |
| 1034 | 100.34 | 0.34 | 1034 | 100.34 | 0.34 |
| 1035 | 100.35 | 0.35 | 1035 | 100.35 | 0.35 |
| 1036 | 100.36 | 0.36 | 1036 | 100.36 | 0.36 |
| 1037 | 100.37 | 0.37 | 1037 | 100.37 | 0.37 |
| 1038 | 100.38 | 0.38 | 1038 | 100.38 | 0.38 |
| 1039 | 100.39 | 0.39 | 1039 | 100.39 | 0.39 |
| 1040 | 100.40 | 0.40 | 1040 | 100.40 | 0.40 |
| 1041 | 100.41 | 0.41 | 1041 | 100.41 | 0.41 |
| 1042 | 100.42 | 0.42 | 1042 | 100.42 | 0.42 |
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| 1102 | 101.02 | 1.02 | 1102 | 101.02 | 1.02 |
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| 1108 | 101.08 | 1.08 | 1108 | 101.08 | 1.08 |
| 1109 | 101.09 | 1.09 | 1109 | 101.09 | 1.09 |
| 1110 | 101.10 | 1.10 | 1110 | 101.10 | 1.10 |
| 1111 | 101.11 | 1.11 | 1111 | 101.11 | 1.11 |
| 1112 | 101.12 | 1.12 | 1112 | 101.12 | 1.12 |
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| 1120 | 101.20 | 1.20 | 1120 | 101.20 | 1.20 |
| 1121 | 101.21 | 1.21 | 1121 | 101.21 | 1.21 |
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| 1123 | 101.23 | 1.23 | 1123 | 101.23 | 1.23 |
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| 1125 | 101.25 | 1.25 | 1125 | 101.25 | 1.25 |
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| 1131 | 101.31 | 1.31 | 1131 | 101.31 | 1.31 |
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INTERNATIONAL COMPANIES AND FINANCE

British Sugar helps ABF increase profit to £317m

By Clare Pearson in London

ASSOCIATED British Foods, the milling and baking group, has announced yesterday that its pre-tax profits up from £283.8m (£287m) to £317.4m in the 12 months to the end of March.

The shares gained 10p to 510p on the announcement by the group, which in January paid 99p to fulfil a long-held ambition to buy British Sugar.

The stock market was pleased to see a solid first-time contribution from the new subsidiary, as well as a strong rise in income from the company's substantial cash resources.

The company said the contribution from British Sugar had exceeded financing costs, accounting for the bulk of earnings from new subsidiaries which in all amounted to

£33.2m. Group turnover was £3.13bn (£2.77bn). Earnings per share rose to 46.9p (41.9p).

The company's year-end has been changed to September. At 8.5p (7.7p), the second interim dividend announced yesterday is in line with a forecast made when British Sugar was acquired. That makes 12.2p (11p) for the 12 months.

Net of interest payable, interest income rose to £138.5m (£124.5m). ABF said it had positioned itself favourably to take advantage of recent strength in the money and gilt markets.

ABF had chosen to finance part of the consideration for British Sugar initially from borrowings, leaving more funds available to benefit from rises in the fixed interest markets due to interest rate cuts.

Within a trading surplus of £188.9m (£159.2m), the UK manufacturing division put in £110.1m. However, ABF said there would have been a £12.7m decrease in profits from these operations if the British Sugar contribution had not been included.

Mr Garry Weston, chairman, said the division, one of Britain's two largest bakers as well as the manufacturer of Ryvita and Burton's biscuits and packer of Twinings tea, had been hit by increasing competitiveness in the UK marketplace.

It was also affected by £12m of closure costs, associated with the shutdown of three big bakeries and other redundancies, and rising wheat prices. *Lex, Page 18*

Bond Corp shareholders agree to debt swap

By Kevin Brown in Sydney

BOND Corporation shareholders yesterday approved a proposed debt-for-equity swap which will leave Mr Alan Bond, the former chairman, with less than 6 per cent of the group's shares.

Mr Peter Lucas, who replaced Mr Bond as chairman last year, said a scheme of arrangement providing for the swap was approved by holders of just over 75 per cent of the group's stock at a shareholders' meeting in Perth.

The vote follows approval from Swiss franc bondholders in Geneva on Thursday, and clears the way for a vote by other European bondholders within two weeks.

The scheme was also approved yesterday by Australia Consolidated Investments, formerly Bell Resources, which remains a substantial creditor.

However, a meeting of partially-secured creditors, which must also approve the scheme, was adjourned after objections by American Express Bank. A further meeting will be held.

The scheme is dependent on approval by the Western Australian Supreme Court, which will hear an application from Bond Corporation after all creditors and shareholders have voted.

Mr Lucas said Mr Bond voted in favour of the reconstruction through Dalhousie, one of his privately-owned family companies, which owns 54 per cent of Bond Corporation.

Several obstacles in the way of the scheme have been overcome, including a decision by the liquidator of J.N. Taylor Holdings, a Bond Corp subsidiary, to withdraw a winding-up action against the group's finance arm.

However, Bond Corp lost a \$150m (US\$259.50m) damages claim on Friday against its former partners in British Satellite Broadcasting Holdings, which has since merged with Mr Rupert Murdoch's Sky Television to form British Sky Broadcasting.

Bond Corp directors say the scheme of arrangement could return between 20 and 25 cents in the dollar to creditors.

West Germans go for eastern gold

Leslie Colitt examines the stampede to pick up cross-border assets

DESPITE the thinness of their order books, some eastern German industrial companies are being snapped up by western predators with near gold-rush fervour.

A case in point is the process plant sector where in recent months Asea Brown Boveri (ABB), the Swedish-Swiss electrical engineering group, has been an eager buyer of eastern German assets.

Last March, ABB's German subsidiary in Mannheim bought Bergmann-Borsig, the leading manufacturer of power station installations, from the Treuhand privatisation agency. The deal was completed despite cancellation of a large order for heat exchangers when the Soviet-designed nuclear plant at Stendal was scrapped for safety reasons.

Automatisierungsanlagen GmbH, which ABB picked up a month earlier, is reeling from a drop in domestic orders for its process automation equipment. Mr Joachim Schulze, managing director of the Cottbus company, is convinced that its future would have been dire if ABB had not appeared on the scene.

"The Treuhand would not have given us further financing," he says as he shows visitors round the company's near-deserted production plants. The Cottbus group has been hit especially by the collapse of orders from former Comecon countries.

In better financial shape is Energiebau Dresden, eastern Germany's leading producer of

high-voltage overhead lines and switchgear which was bought by ABB late last year. Energiebau Dresden makes a profit ABB's other recent eastern German acquisitions are expected to remain in the red until 1993.

However, Mr Percy Barnevik, head of ABB, has not made this decisive push into eastern Germany on the back of current new order-flows, although there are signs that the decline in order intake has begun to bottom out. He is preparing the company for an expected wave of public spending to improve infrastructure in the five new east German Länder, or states.

According to Mr Eberhard von Koerber, the chairman of ABB Germany, German electricity suppliers alone plan to spend close to DM40bn (\$23.30bn) on new power generation facilities in east Germany by 1995.

Mr von Koerber said ABB and other companies investing in eastern Germany expected a "certain amount of preferential treatment" for local suppliers from public procurement bodies.

ABB has already obtained a letter of intent to build a new power station at Rostock for more than DM100m which is to be completed in 1995. The work is to be divided between ABB Bergmann-Borsig in east Berlin and ABB in Mannheim.

At the same time, ABB has won a DM20m contract to plan a flue-gas desulphurisation system for two 500-megawatt units of the Boxberg power station.



Percy Barnevik: preparing for public spending wave

the largest lignite-fuelled electricity plant in Europe and an immense air polluter. Total work involves the retrofitting of the two units, installation of desulphurisation scrubbers and new electrical filters.

ABB expects to complete negotiations shortly with the Treuhand for the takeover of two transformer factories in Nauen and Halle.

Mr Achim Lennertz, the Treuhand negotiator with ABB, said the fact that negotiations were undertaken by ABB's German unit made for smoother handling from the start. Neither he nor ABB, however, would disclose how much ABB paid for the

eastern German acquisitions.

Mr Lennertz said that while the price paid was important, so was the amount of money a western bidder was prepared to invest in the companies as well as how many jobs would be created.

Mr Wolf Schöde, a Treuhand spokesman, said companies were often sold for a "negative price" in order to allow the investor group to create a tax-paying company. He complained that companies considering investments in eastern Germany were often overly cautious and reluctant to surmount hurdles or take risks.

"Next year, the telephones will be working and other problems will have vanished, but by then the best companies will have been privatised," he says.

ABB plans to employ 10,000 people in eastern Germany by next year compared with 35,000 in western Germany - although personnel is being reduced in all its eastern companies. Bergmann-Borsig, which had 3,500 employees at the end of March will release more than 1,000 next month. Retraining has been introduced and social plans implemented for those dismissed.

Average wages are 60 per cent below those in western Germany, but will reach western German levels by April 1994 in agreement with the IG Metall union. Significantly, the 280 apprentices are being kept on although not all will qualify for jobs with the company.

First reverse at JVC in four years

By Emiko Terazono in Tokyo

JVC, the Japanese consumer electronics company, yesterday reported a 27.1 per cent rise in consolidated pre-tax profits for the year to March 1991.

JVC (Victor Company of Japan), which posted its first pre-tax profit fall in four years, blamed cuts in product prices due to intensified competition, increases in research and development and advertising expenses for the decline.

Overall sales increased 6.9 per cent to ¥286.2bn thanks to a 6 per cent rise in its video and related equipment interests. Television sales increased by 13 per cent and information related equipment rose by 20 per cent. After-tax profits fell 13.1 per cent to ¥16bn.

On a non-consolidated basis, JVC said that pre-tax profits fell by 8.6 per cent to ¥22.0bn as sales rose 3.3 per cent to ¥688.7bn.

Export sales, which account for 55 per cent of total sales of the parent company, rose by 15 per cent to ¥353.3bn. Video and related equipment rose 2 per cent and information related equipment increased 21 per cent, but sales in audio equipment fell 4 per cent.

For the year ending March 1992, the parent company projects a 0.4 per cent drop in pre-tax profits to ¥22bn on an 8 per cent rise in sales to ¥688bn.

Two buy 60% stake in Fundia

RAUTARUUKKI, the Finnish state-owned steel company, and Norsk Jern, a Norwegian steel holding company, have between them acquired a 60 per cent stake in Fundia, a Swedish steel reinforcing bars group, writes Rikke Tiedert in Helsinki.

The purchase price is put at around SKr330m (\$53.4m). Rautaruukki and Norsk Jern hope to purchase the remaining 40 per cent of Fundia which had sales of SKr2.5bn in 1990.

The acquisition will help to strengthen Rautaruukki's position in long steel products, including reinforcing bars and wire rods.

French glove-maker in breathing apparatus deal

By George Graham in Paris

COMASEC International, the French company which is European leader in the production of protective gloves, has bought Interspiro, a manufacturer of breathing apparatus, from Sweden's Nobel group.

No price was announced for the deal, but Comasec is understood to have paid over FF100m (\$17.2m) for Interspiro, which had sales of SKr12m (\$23m) last year.

The acquisition will propel Comasec close to the two world leaders in breathing apparatus, tripling its presence in the

European market. Interspiro, which specialises in fire-fighting and pollution control masks, had 12 per cent of the European market, to Comasec's 6 per cent.

In North America, Comasec said its share of the breathing apparatus market would rise to 25 per cent with the addition of Interspiro's 7 per cent market share. Comasec, which is owned by the Bernard family, had sales of FF62m last year and ranks second in the world in the manufacture of industrial protective gloves.

British Steel chief executive quits

By Charles Leadbeater, Industrial Editor

BRITISH STEEL'S chief executive, Mr Martin Llowarch, last night unexpectedly announced his resignation.

Mr Llowarch's departure will threaten the company's plans to organise an orderly succession to Sir Robert Scholey, aged 70, the chairman, who completes his contract at the end of this year.

Although the succession had not been discussed on the board, it was widely assumed that Mr Llowarch, 55, was being groomed for the post.

Mr Brian Moffat, 52, the finance director, will now take

British Steel chief executive quits

By Charles Leadbeater, Industrial Editor

over as chief executive on July 1.

Mr Llowarch's resignation comes as British Steel is responding to the most savage downturn in steel demand since the recession of 1980-81. The company denied that his departure reflected a rift between Mr Llowarch and Sir Robert over strategy.

The resignation will put Sir Robert under pressure to delay his departure. The company will almost certainly have to consider an outsider as chairman. Plans for the succession will be the priority at the

Ares-Serono sales up by 26% to \$176m

By Charles Leadbeater, Industrial Editor

next meeting of the board.

Mr Llowarch told Sir Robert last week that he wanted to retire to pursue other interests. Although several directors contacted him to explore whether there was any grounds on which he might be persuaded to stay, Mr Llowarch remained resolute.

The past year has been particularly tough at British Steel as profits have fallen in the wake of the recession. Mr Llowarch has been responsible for the extensive cost cutting at the company which has led to thousands of job losses.

Ares-Serono sales up by 26% to \$176m

By Charles Leadbeater, Industrial Editor

ARE-SERONO, the Swiss-based pharmaceutical company, increased first-quarter sales by 26 per cent to \$176.4m, writes William Duffell in Geneva.

Excluding currency fluctuations, growth in turnover was 17 per cent.

Operating income grew by 18 per cent to \$33.5m, but net earnings rose only 3.3 per cent to \$13.5m, or \$24.76 a share.

The group, which reports in US dollars and pays its dividend in Swiss francs, is paying an unchanged dividend of SFR25 per bearer share and SFR10 per registered share on the 1990 account.

New Issue

This information appears as a matter of record only. The bonds described below are offered already.

May 17, 1991

BARCLAYS

Barclays Overseas Capital Corporation B.V.
Amsterdam, The Netherlands

DM 300,000,000
8% % Bearer Bonds of 1991/1994

unconditionally and irrevocably guaranteed by

Barclays Bank PLC
London, United Kingdom

Offering price: 101% %

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| Dresdner Bank Aktiengesellschaft | Barclays de Zoete Wedd Limited |
| Merck, Finck & Co. | |

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| Baden-Württembergische Bank Aktiengesellschaft | Bank Brussel Lambert N.V. | BFG-Bank |
| Banque Nationale de Paris S.A. & Co. (Deutschland) OHG | Bayerische Hypotheken- und Wechsel-Bank Aktiengesellschaft | Bayerische Landesbank Girozentrale |
| BHF-Bank | Deutsche Girozentrale - Deutsche Kommunalbank - | DG Bank Deutsche Genossenschaftsbank |
| Generale Bank N.V. | Hessische Landesbank - Girozentrale - | The Long-Term Credit Bank of Japan (Deutschland) Aktiengesellschaft |
| Merrill Lynch Bank AG | Norddeutsche Landesbank Girozentrale | The Nikko Securities Co., (Deutschland) GmbH |
| Österreichische Länderbank Aktiengesellschaft | Stadtparkasse Köln | Sumitomo Bank (Deutschland) GmbH |
| Südwestdeutsche Landesbank Girozentrale | Swiss Volksbank | Vereins- und Westbank Aktiengesellschaft |

New Issue

This announcement appears as a matter of record only.

May 21, 1991

Staatsbank Berlin
Berlin

DM 2 500 000 000,-
Floating Rate Notes of 1991/1993 VI

DM 2 500 000 000,-
Floating Rate Notes of 1991/1996 VII

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| Bayerische Hypotheken- und Wechsel-Bank Aktiengesellschaft | Deutsche Bank Aktiengesellschaft | Bayerische Landesbank Girozentrale |
| Commerzbank Aktiengesellschaft | CSFB-Effektenbank Aktiengesellschaft | Dresdner Bank Aktiengesellschaft |
| BHF-BANK | Schweizerische Bankgesellschaft (Deutschland) AG | Industriekreditbank AG Deutsche Industriebank |
| Baden-Württembergische Bank Aktiengesellschaft | Bank Brussel Lambert N.V. | BFG-Bank |
| Berliner Bank Aktiengesellschaft | Daiwa Europe (Deutschland) GmbH | DSL Bank Deutsche Siedlungs- und Landesrentenbank |
| Nikko Bank (Deutschland) GmbH | Salomon Brothers AG | NOMURA BANK (Deutschland) GmbH |
| Trinkaus & Burkhardt Kommanditgesellschaft auf Aktien | YAMAICHI BANK (Deutschland) GmbH | |
| Dongsuh Securities Co., Ltd. | Vereins- und Westbank Aktiengesellschaft | |

AMERICA

Bonds lift equities in light trading

Wall Street

AN EARLY rise in bond values helped boost sentiment in the stock market yesterday morning, but with investors still adopting a wait-and-see approach to equities, gains were relatively modest, writes Patrick Harrington in New York.

By 1.30 pm the Dow Jones Industrial Average was up 7.38 at 2,894.01. The other indices were little changed at mid-session, with the more broadly based Standard & Poor's 500 up just 0.74 at 373.33 at 1 pm, and the Nasdaq composite of over-the-counter stocks down 0.5 at 481.33.

Turnover on the New York SE was very light at 62.5m shares by 1 pm. The fact that

declining stocks were outnumbered by advancing stocks by 724 to 643 testified to the generally weak tone of the market.

The opening advance came in the wake of higher bond prices, which reacted favourably to reports of comments from Mr Alan Greenspan, chairman of the Federal Reserve, hinting at further interest rate cuts if the economy did not soon show signs of recovering from its recession.

However, the lack of volume confirmed that investors were staying away from equities until they could see a significant improvement in the economic outlook.

The big technology stocks, which were underpinned by Compaq's profit warning last week, put in a mixed perfor-

mance. Compaq, which suffered from heavy selling after its forecast of weak profits, bounced back with a rise of 6% to \$36. IBM, however, remained subdued, dropping 1% to \$103.4, while Digital Equipment rose 1% to \$63 and Hewlett-Packard, which announced better-than-expected earnings on Wednesday, rose 1% to \$49.

Dow Chemical rose 1% to \$63 after two securities houses, First Boston and Smith, Barney, upgraded their investment ratings on the stock, citing expected improvements in the company's earnings ability.

K-Mart, the giant retailing group, jumped 1% to \$41.4 after reporting a rise in first quarter earnings to 53 cents a share, up from 50 cents a share

a year earlier, in spite of the nationwide slowdown in consumer spending.

Ameritrust, the mid-west commercial banking group, climbed 2% to \$19.75 after a rival regional bank, confirmed that it had offered to negotiate a \$88m stock swap acquisition of Ameritrust. National City shares fell 1% to \$35 on the news.

LaserMaster Technologies tumbled 1% to \$5 after a local Minneapolis newspaper highlighted the printing product maker's large inventory levels and dwindling cash reserves.

The weekly review of the world's stock markets will appear in tomorrow's paper.

Revision of world indices reflects changes over the past four years

Adrian Dicks of FT Statistics explains the review of the Financial Times-Actuaries World Indices, and the changes that result

THE FT-Actuaries World Indices, which celebrated their fourth birthday last March, were set up a few months before the start of a period of turbulence in the world's financial markets. The aim of the Financial Times and its partners in the venture - Goldman Sachs, County NatWest, Wood Mackenzie and the Institute and Faculty of Actuaries - was twofold.

● The World Indices were to provide a set of yardsticks for the world's principal stock markets.

● They were to offer an independent solution to investors wishing to peg the performance of their portfolios to the changing relative values of groups of markets.

Since then, the World Indices have gained wide acceptance among investors and analysts of the financial markets, and especially among portfolio managers running international index-tracking funds.

With all these users in mind, the World Index Panel decided last year to carry out a detailed review of the FT-AWI rules as they affect each of the 94 markets currently included, and to reflect the changes of the past four years.

The aim was also to take advantage of the improvement in price data which has followed the introduction of continuous trading to new markets, and of the greater volume of corporate financial disclosure.

Within each market, researchers have checked every company to make sure that the indices continue to follow their original guidelines - that constituent stocks should be readily tradable and freely accessible to international investors, that the selection for each country should reflect the sectoral distribution of the local market, and that coverage should be as broad and consistent as possible.

Reviewing the rules has created some difficult issues. Some countries, for example, have a distressing tendency to put on weight without trying. There must be no bias in the

representation in the World Indices of different countries' markets; all should be represented in the same proportion to the equity available. The panel's objective is to cover in each country between 25 and 90 per cent of the "investible universe" - that is, the total value of the stocks available to international investors in that market.

Yet in Finland, coverage had crept up to 98 per cent of the investible universe. The explanation

was that the list of securities available to investors was large enough to pass the minimum size test.

Large companies in several European countries remain ineligible because of huge, long-term holdings by governments or bodies under their control. Relatively small companies have been added to maintain a balance between sectors comparable to that of the local market.

In a few countries it was hard to reflect the changing industrial complexion. South Africa's economy may be far less dependent on gold than in the past, yet the structure of the Johannesburg stock market still looks much as it did 20 years ago.

A dozen smaller gold mines were deleted, yet the weighting of the Basic Industries economic sector has gone up to 69 per cent in the new index from 60 per cent in the old.

The panel's next task will be to review the classification system below economic sector level. The present system is included in the new World Indices rule book, yet there is clear demand among institutional investors for a new structure which can be applied worldwide.

Domestic is another problem. Transnational hybrids such as Eurotunnel can be "split" in proportion to the listing of their shares between France and the UK. But what to make of Jardine Matheson or Hongkong Bank? And what of cases such as the Dutch or Scandinavian "internationals", consistently traded most heavily in markets outside their countries of origin?

Comment from users of the indices is welcome.

Details of the constituent changes, which will come into effect with the calculation of the World Indices on Monday June 3, 1991, were published in yesterday's Financial Times.

The new FT-AWI rule book is available from the Financial Times, One Southwark Bridge, London SE1 9UL, price £50.

Adrian Dicks is Manager, FT Statistics, and the FT representative on the World Index Panel.

Net effect of changes to the FT-Actuaries World Indices

| | Current Index | % of World | Revised Index | % of World | Net Change | % of World |
|----------------|---------------|------------|---------------|------------|------------|------------|
| Australia | 1.4 | 74 | 1.4 | 72 | -0.1 | -2 |
| Austria | 0.2 | 19 | 0.2 | 20 | 0.0 | 1 |
| Belgium | 0.7 | 60 | 0.7 | 48 | -0.0 | -12 |
| Canada | 2.1 | 117 | 2.1 | 115 | -0.1 | -2 |
| Denmark | 0.4 | 31 | 0.4 | 37 | 0.0 | 8 |
| Finland | 0.0 | 21 | 0.0 | 16 | -0.0 | -5 |
| France | 3.1 | 112 | 3.1 | 115 | 0.0 | 3 |
| Germany | 3.7 | 88 | 3.4 | 85 | -0.3 | -3 |
| Hong Kong | 1.0 | 47 | 1.2 | 55 | 0.2 | 8 |
| Ireland | 0.1 | 17 | 0.1 | 18 | 0.0 | 1 |
| Italy | 1.4 | 91 | 1.5 | 77 | -0.0 | -14 |
| Japan | 32.6 | 452 | 33.2 | 474 | 0.6 | 22 |
| Malaysia | 0.1 | 33 | 0.2 | 68 | 0.0 | 35 |
| Mexico | 0.3 | 12 | 0.4 | 16 | 0.1 | 8 |
| Netherlands | 1.8 | 40 | 1.5 | 31 | -0.1 | -9 |
| New Zealand | 0.1 | 14 | 0.1 | 13 | -0.0 | -1 |
| Norway | 0.1 | 30 | 0.1 | 32 | 0.0 | 2 |
| Singapore | 0.2 | 25 | 0.3 | 38 | 0.1 | 13 |
| South Africa | 0.9 | 60 | 1.1 | 61 | 0.2 | 1 |
| Spain | 1.1 | 41 | 1.2 | 55 | 0.2 | 14 |
| Sweden | 0.4 | 27 | 0.4 | 27 | 0.0 | 0 |
| Switzerland | 1.4 | 65 | 1.4 | 57 | -0.0 | -8 |
| United Kingdom | 10.9 | 295 | 10.2 | 241 | -0.7 | -54 |
| United States | 36.2 | 524 | 36.0 | 526 | -0.2 | -2 |
| World | 100.0 | 2,286 | 100.0 | 2,276 | -0.0 | -18 |

Source: The Financial Times Ltd, Goldman, Sachs & Co, and County NatWest Securities Ltd

ASIA PACIFIC

Volume shrinks to four-month low

Tokyo

SHARE PRICES declined across the board as thin volume accentuated the effect of selling by arbitrageurs and investment trusts, writes Emilio Terzani in Tokyo.

The Nikkei average lost 178.91 to 25,523.03, while turnover shrank from 260m shares to 170m, falling below 200m for the first time since January 14. The Nikkei set a day's high of 25,738.73 at the opening and a low of 25,350.70 in the afternoon.

Falls outnumbered advances by 765 to 183, with 158 issues unchanged. The Topix index of all first section stocks shed 14.62 to 1,938.82, and in London trading the ISE/Nikkei 50 index eased 4.67 to 3,457.37.

High-technology issues continued to weaken. Sony receded ¥100 to ¥5,890, moving below the ¥6,000 support level, and TDK slipped ¥90 to ¥5,140. Canon ended ¥40 down at ¥1,490 on a lower than expected profit forecast for the current year.

Matsushita Refrigeration fell ¥90 to ¥1,070 on prospects of lower pre-tax profits. Matsushita Seiko lost ¥41 to ¥948 and Matsushita Kokioki Electronics shed ¥80 to ¥2,000.

Speculative shares retreated on rumours of selling by speculative groups. Tobishima, the contractor, dropped ¥120 to ¥1,070. Tokai Kanko, the hotel chain, declined ¥97 to ¥601 and Nihon Hanyoku, an agrochemical company, dipped ¥150 to ¥3,100.

Japan Steel Works, the most active issue of the day, weakened ¥15 to ¥765 after reaching a year's high of ¥785 in the morning. The issue attracted early buying interest as the 3,917.09, up 34.25 or 0.9 per

cent. The index ended within 33 points of its record high. Turnover was heavy at HK\$1.85bn, up from HK\$1.53bn. Hopes that the new airport would now go ahead fuelled gains, with the property sector in the lead. Cheung Kong climbed 30 cents to HK\$12.20. New World Development added 50 cents at HK\$11.20 and Hongkong Land, which topped the most active list, gained 40 cents to HK\$9.35.

SINGAPORE rose after some encouraging economic figures, but ended below the day's high on profit-taking. The Straits Times Industrial index firmed 8.46 to 1,522.21 but volume fell to 32m shares from 42m.

Relief that Singapore Airlines' results were no worse than expected helped its foreign shares to rise 70 cents to S\$19.60 and its local shares to gain 30 cents to S\$14.40.

AUSTRALIA was steady. The All Ordinaries index eased 0.1 to 1,581.6 in this turnover of A\$32m, down from A\$715m.

Admission to the ASX's associates were reinstated by the Australian Stock Exchange. The stocks had been suspended since May 2, when a corporate restructuring plan collapsed.

Admission dropped 3 cents to 9 cents and David Jones fell 13 cents to 30 cents, but Tooth and Co rose 4 cents to 38 cents. Rothmans, the tobacco company, appreciated 15 cents to A\$12.90 after announcing its annual group operating profit. Coal and Allied, subject of a hostile takeover bid, fell 1 cent to A\$5.54. CRA said it held more than 30 per cent of the cost producer as the bid ended.

Roundup

ACTIVE TRADING lifted Hong Kong nearer to its all-time high yesterday, but most Pacific Rim markets were quiet.

HONG KONG reached another post-1987 crash peak as the Nikkei 50 index eased the 3,900 level to close at 3,917.09, up 34.25 or 0.9 per

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Who cut the mustard in the £108 million Devro buy-out?



Devro is one of the world's biggest manufacturers of sausage casings.

And it has now become the biggest Scottish company ever to achieve a management buy-out - as well as being one of the biggest buy-outs in the UK so far this year.

The transaction was led, structured, negotiated and arranged by Charterhouse Development Capital.

As a result, the Devro management team are now free to shape their future in the global food industry; and Charterhouse has confirmed its position as one of the UK's leading development capital and buy-out houses.

Find out how we could help you. Call Gordon Bonnyman on 071-248 4000.

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EUROPE

Milan eases on renewed fears over Fiat

FIAT continued to weigh down Italy yesterday, while Spain moved higher in quiet trading, but most of the excitement was restricted to the emerging markets. Most houses were closed for Whit Monday, writes Our Markets Staff.

MILAN eased in choppy trading. There were renewed fears that Fiat would cut its 1990 dividend, which is due to be published today. The Comit index fell 1.57 to 573.35.

Trading in Fiat began on a bullish note, with the stock gaining 1.40 to be set officially at L5,600. But the share then fell to L5,450 after hours. Montedison also featured before the release of its 1990 results and dividend. The shares closed L5

FT-SE Eurotrack 100 - May 20

| Open | 10 am | 11 am | Noon | 1 pm | 3 pm | Close |
|---------|---------|---------|---------|---------|---------|---------|
| 1119.41 | 1120.45 | 1120.13 | 1119.49 | 1119.80 | 1119.24 | 1116.85 |

| Day's High | N/A | Day's Low | N/A |
|------------|---------|-----------|---------|
| May 17 | 1118.61 | May 18 | 1112.68 |
| May 19 | 1109.43 | May 20 | 1116.47 |
| May 21 | 1123.32 | | |

Base value 1000 (par value) 1 indicative

lower at L1,425 and eased later to L1,403.

General rose L200 to L35,100 but gave up its gains after hours. The insurer has still not disclosed the reason behind its rights issue, and there was speculation that the move was aimed solely at strengthening Mediobanca's position as a

madura to Portuguese savings bank Caixa Geral de Depositos for about Pta10m.

Construction stocks firmed, with Cubiertas up Pta750 or 4.1 per cent at Pta15,650.

ISTANBUL gained 5.1 per cent after the central bank said that it would introduce price limits at tomorrow's stock exchange Treasury bill auction, to keep maximum rates to 66 per cent compared with 74 per cent at the previous auction.

The 75-share index rose 177.73 to 3,652.47 as turnover grew to TL22.5bn from TL19.8bn. ATHENS fell sharply, with the financial sector recording the biggest losses. The general index shed 37.34 or 3.6 per cent to 990.59.

FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

| NATIONAL AND REGIONAL MARKETS | FRIDAY MAY 17 1991 | | | | | | | THURSDAY MAY 16 1991 | | | | | | | DOLLAR INDEX | | |
|--|--------------------|----------------|----------------------|-----------|----------|----------------------|--------------------|----------------------|----------------------|-----------|----------|----------------------|-----------|----------|-------------------|--------|-------|
| | US Dollar Index | Day's Change % | Pound Sterling Index | Yen Index | DM Index | Local Currency Index | Local % chg on day | US Dollar Index | Pound Sterling Index | Yen Index | DM Index | Local Currency Index | 1991 High | 1991 Low | Year ago (approx) | | |
| Figures in parentheses show number of lines of stock | | | | | | | | | | | | | | | | | |
| Australia (72) | 145.21 | -0.9 | 125.42 | 127.08 | 131.06 | 123.38 | -0.7 | 5.39 | 146.46 | 124.44 | 127.35 | 128.22 | 142.25 | 147.30 | 112.74 | 131.62 | |
| Austria (16) | 200.66 | -1.5 | 173.32 | 175.62 | 181.11 | 177.98 | -0.6 | 1.48 | 203.78 | 173.12 | 177.17 | 179.78 | 178.98 | 222.37 | 187.00 | 246.01 | |
| Belgium (26) | 138.47 | -0.5 | 118.03 | 121.19 | 124.37 | 118.86 | +0.2 | 4.94 | 138.23 | 118.29 | 121.05 | 122.54 | 116.66 | 151.20 | 125.49 | 138.61 | |
| Canada (117) | 155.79 | -0.2 | 116.15 | 117.71 | 123.45 | 118.96 | -0.1 | 3.51 | 137.11 | 118.49 | 119.21 | 120.96 | 141.10 | 125.49 | 136.13 | 148.00 | |
| Denmark (31) | 287.44 | -1.1 | 205.08 | 207.80 | 214.30 | 213.62 | +0.3 | 1.57 | 241.84 | 205.47 | 210.28 | 213.37 | 212.98 | 217.74 | 254.04 | 284.04 | |
| Finland (21) | 113.42 | -0.8 | 97.98 | 98.28 | 102.38 | 98.18 | -0.9 | 2.55 | 114.47 | 97.28 | 98.54 | 101.00 | 95.07 | 123.18 | 90.71 | 141.54 | |
| France (111) | 136.16 | -1.9 | 117.53 | 118.18 | 122.93 | 120.40 | +0.1 | 3.40 | 132.71 | 117.83 | 119.77 | 122.37 | 157.48 | 117.63 | 121.56 | 131.66 | |
| Germany (83) | 106.85 | -1.8 | 93.94 | 95.10 | 98.06 | 96.06 | +0.5 | 2.27 | 110.63 | 93.98 | 96.20 | 97.60 | 97.60 | 102.48 | 103.48 | 123.60 | |
| Hong Kong (47) | 160.14 | +0.6 | 138.32 | 140.15 | 144.54 | 139.11 | +0.6 | 4.27 | 159.15 | 135.22 | 138.38 | 140.42 | 158.12 | 119.22 | 142.10 | 133.00 | |
| Ireland (11) | 125.84 | -2.1 | 132.10 | 133.85 | 139.04 | 136.40 | +0.0 | 4.03 | 135.20 | 132.71 | 135.82 | 137.81 | 133.39 | 132.88 | 133.86 | 153.06 | |
| Italy (81) | 162.82 | -1.7 | 86.82 | 88.49 | 91.89 | 72.94 | +0.2 | 3.25 | 77.25 | 85.84 | 87.17 | 88.18 | 72.79 | 82.23 | 101.56 | 121.66 | |
| Japan (452) | 137.36 | -0.4 | 118.64 | 120.21 | 123.99 | 120.21 | +0.3 | 1.71 | 137.91 | 117.17 | 119.91 | 121.69 | 119.91 | 147.77 | 118.35 | 151.12 | |
| Malaysia (53) | 226.71 | +0.4 | 197.54 | 200.15 | 205.41 | 214.82 | +0.6 | 3.12 | 227.62 | 193.56 | 196.07 | 200.99 | 241.37 | 247.73 | 223.82 | 226.22 | |
| Mexico (12) | 988.19 | -0.9 | 836.25 | 847.33 | 873.83 | 814.59 | -1.0 | 4.00 | 978.69 | 828.82 | 849.21 | 861.70 | 3195.04 | 596.27 | 534.45 | 501.89 | |
| Netherlands (40) | 134.96 | -3.5 | 116.57 | 118.11 | 121.81 | 120.49 | -1.4 | 4.32 | 139.92 | 118.68 | 121.68 | 123.45 | 122.90 | 145.73 | 125.70 | 141.60 | |
| Norway (19) | 159.52 | -0.5 | 137.78 | 139.47 | 142.19 | 137.19 | -0.5 | 1.46 | 164.28 | 137.43 | 139.43 | 141.98 | 137.43 | 141.98 | 137.43 | 141.98 | |
| Norway (30) | 200.81 | -2.3 | 173.45 | 175.75 | 181.25 | 183.96 | -0.9 | 1.64 | 205.53 | 174.80 | 178.71 | 181.35 | 183.96 | 223.24 | 192.24 | 242.80 | |
| Singapore (25) | 193.63 | -0.3 | 172.43 | 174.13 | 180.17 | 162.88 | +0.1 | 2.06 | 200.15 | 170.05 | 174.03 | 176.59 | 162.71 | 202.25 | 151.63 | 203.15 | |
| South Africa (80) | 211.43 | -0.8 | 182.62 | 185.03 | 190.82 | 151.04 | -0.1 | 3.74 | 212.78 | 180.78 | 185.00 | 175.22 | 171.28 | 173.00 | 190.71 | 190.71 | |
| Spain (41) | 159.52 | -2 | 137.78 | 139.47 | 142.19 | 137.19 | -0.5 | 1.46 | 164.28 | 137.43 | 139.43 | 141.98 | 137.43 | 141.98 | 137.43 | 141.98 | |
| Spain (41) | 177.31 | -0.8 | 158.13 | 160.55 | 168.04 | 152.22 | +0.9 | 2.70 | 178.45 | 151.82 | 155.15 | 157.45 | 168.75 | 202.12 | 146.90 | 202.67 | |
| Switzerland (66) | 92.05 | -1.7 | 76.51 | 80.57 | 83.09 | 83.72 | -0.1 | 2.33 | 93.62 | 79.54 | 81.40 | 82.60 | 83.90 | 100.57 | 92.17 | 101.35 | |
| United Kingdom (294) | 169.12 | -2.3 | 146.07 | 147.89 | 152.62 | 146.07 | -0.7 | 4.52 | 173.16 | 147.12 | 150.64 | 132.78 | 147.12 | 168.44 | 125.27 | 154.94 | |
| USA (523) | 150.78 | +0.1 | 130.23 | 131.98 | 136.09 | 150.78 | +0.1 | 3.25 | 150.88 | 128.02 | 131.02 | 132.96 | 150.88 | 158.24 | 129.25 | 143.26 | |
| Europe (506) | 136.94 | -2.1 | 118.29 | 119.84 | 123.80 | 120.84 | -0.3 | 3.90 | 139.90 | 118.85 | 121.64 | 123.43 | 121.32 | 151.52 | 105.55 | 140.13 | |
| Norway (109) | 176.91 | -1.4 | 152.80 | 154.83 | 158.67 | 154.38 | -0.5 | 2.09 | 179.33 | 152.97 | 155.98 | 158.23 | 155.98 | 200.81 | 155.50 | 166.14 | |
| Pacific Basin (643) | 136.94 | -2.1 | 118.29 | 119.84 | 123.80 | 120.84 | -0.3 | 3.90 | 139.90 | 118.85 | 121.64 | 123.43 | 121.32 | 151.52 | 105.55 | 140.13 | |
| Asia Pacific (157) | 37.37 | -1.1 | 31.14 | 33.71 | 34.48 | 31.58 | +0.0 | 2.22 | 39.47 | 31.45 | 32.26 | 32.04 | 32.04 | 42.87 | 17.46 | 21.29 | 44.80 |
| North America (640) | 149.85 | -0.0 | 129.41 | 131.14 | 135.26 | 148.30 | +0.0 | 3.26 | 146.76 | 127.24 | 130.23 | 125.15 | 148.22 | 157.14 | 125.91 | 147.43 | |
| Europe Ex. UK (542) | 117.34 | -2.0 | 101.35 | 102.71 | 105.92 | 106.20 | +0.0 | 3.13 | 119.67 | 101.98 | 104.07 | 105.61 | 106.22 | 129.80 | 106.85 | 139.91 | |
| Pacific Ex. Japan (191) | 145.14 | -0.2 | 125.36 | 127.04 | 131.01 | 125.06 | -0.1 | 4.72 | 145.59 | 123.53 | 126.43 | 128.29 | 129.13 | 145.98 | 111.40 | 127.50 | |
| World Ex. US (2281) | 139.11 | -1.1 | 117.31 | 118.86 | 123.99 | 118.86 | -0.1 | 3.26 | 146.76 | 118.46 | 120.96 | 122.96 | 122.96 | 145.98 | 111.40 | 127.50 | |
| World Ex. Japan (139) | 139.11 | -1.1 | 117.31 | 118.86 | 123.99 | 118.86 | -0.1 | 3.26 | 146.76 | 118.46 | 120.96 | 122.96 | 122.96 | 145.98 | 111.40 | 127.50 | |
| World Ex. So. Af. (773) | 141.57 | -0.7 | 122.26 | 123.81 | 127.76 | 131.39 | +0.0 | 2.62 | 142.51 | 121.08 | 123.92 | 125.74 | 131.36 | 146.92 | 122.92 | 145.32 | |
| World Ex. Japan (2330) | 145.80 | -0.8 | 125.93 | 127.61 | 131.61 | 137.51 | -0.1 | 3.56 | 146.96 | 124.96 | 127.78 | 129.68 | 137.41 | 149.83 | 126.69 | 144.17 | |
| The World Index (1891) | 141.99 | -0.7 | 122.64 | 124.27 | 128.15 | 131.53 | +0.0 | 2.63 | 142.93 | 121.44 | 124.26 | 126.12 | 131.51 | 148.09 | 123.26 | 145.45 | |